

Дорогие участники!

Приветствуем Вас на V Российских курсах последипломного образования по клиническому диабету, организованных Европейской ассоциацией по изучению диабета (EASD). Впервые аналогичные курсы состоялись в 2007 году в Санкт-Петербурге. С тех пор курсы регулярно проводятся в разных городах страны, мы двигались с запада на восток: Казань – Екатеринбург – Владивосток. Но пятые курсы было решено провести во второй раз в городе с потрясающей историей и потрясающего великолепия, нашей северной столице, Санкт-Петербурге. Каждый раз наши курсы привлекают большое количество молодых перспективных докторов-эндокринологов, будущих великих врачей и ученых нашей страны.

Наши курсы неизменно отличают высокий профессионализм и непринужденная атмосфера, независимость суждений, доказательная медицина и экспертные мнения. Особенно значимым для молодых врачей является возможность неформального общения с ведущими экспертами различных областей эндокринологии, как отечественными, так и зарубужными. Просим Вас быть активными и настойчивыми в приобретении знаний, улучшении Вашего навыка в международном общении, тренировке умений ставить вопросы и давать ответы и, самое главное, применять полученные знания и навыки на практике в Вашем повседневном труде и творчестве.

Наше мирное научное и медицинское сотрудничество вносит очень важный вклад в укрепление мира между странами Евразийского континента.

С уважением,

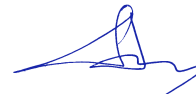
Экс-председатель комитета
по последипломному
образованию EASD
Профессор, Лешек Чуприяк



Со-председатель российского
оргкомитета курсов
Д.м.н. профессор,
Гурьева Ирина Владимировна



Со-председатель российского
оргкомитета курсов
Д.м.н. профессор
Аметов Александр Сергеевич



Dear participants!

We are glad to welcome you on the V Russian EASD Postgraduate Course on Clinical Diabetes arranged by the European Association for the Study of Diabetes (EASD). It is unbelievable but the first Courses were held in Russia in 2007 in St. Petersburg. Since, the courses are regularly held in different cities of our country, we moved from West to East: Kazan – Ekaterinburg – Vladivostok. But this year we made a decision to conduct 5th Courses for the second time at the most beautiful city with a fascinating history, our Northern capital, St. Petersburg. Every time the Courses attract a large number of young prospective endocrinologists, famous doctors and scientists of our country in the nearest future.

Our Courses are known by high professionalism of the speakers and informal atmosphere among participants, independence in judgments and evidence-based medicine. The most important part of the Courses is possibility for young doctors to discuss face to face with leading experts in clinical diabetes from Russia and abroad various issues of endocrinology. We ask you to be active and persistent in acquiring of knowledge, improving your skills in international communications, training skills to raise questions and seek answers and to implement new skills into practice in your daily work.

Our peaceful scientific and medical cooperation makes important contribution to strengthening of peace between different countries of the Euroasian continent.

Yours faithfully,

Prof. Leszek Czupryniak
Past Chairman EASD Postgraduate
Education



Prof. Irina Gurieva
Co-chairman Local Organizing
Committee Russian Medical Academy
of Postgraduate Education



Prof. Alexander Ametov
Co-chairman Local Organizing
Committee Russian Medical Academy
of Postgraduate Education



**ПРОГРАММА V КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ
ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ
ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD)
САНКТ-ПЕТЕРБУРГ, 12-14 АПРЕЛЯ 2018 г.**

Четверг, 12 апреля 2018 г.

- 10:00 – 14:30** Регистрация участников на стойке регистрации
- 14:30** **ЦЕРЕМОНИЯ ОТКРЫТИЯ:**
Гринева Е.Н. – д.м.н., профессор, директор Института эндокринологии
 НМИЦ им.В.А.Алмазова
Карпова И.А. – к.м.н., главный диабетолог Комитета по здравоохранению
 Правительства Санкт-Петербурга
Халимов Ю.Ш. – д.м.н., профессор, начальник кафедры военно-полевой
 терапии ФГКОУ ВПО «Военно-медицинская академия им. С.М. Кирова»,
 главный эндокринолог Комитета по здравоохранению Правительства
 Санкт-Петербурга, главный эндокринолог Министерства обороны РФ
Залевская А.Г. – к.м.н., доцент кафедры факультетской терапии
 Первого Санкт-Петербургского государственного медицинского
 университета им. акад. И.П. Павлова
Аметов А.С. – д.м.н., профессор, заведующий кафедрой эндокринологии
 ФГБОУ ДПО «Российская медицинская академия непрерывного
 профессионального образования»
Чуприяк Л. – экс-председатель комитета по последипломному
 образованию по клиническому диабету EASD, от имени EASD, Польша
Гурьева И.В. – д.м.н., профессор, от имени российского организационного
 комитета по проведению курсов EASD, Россия

СЕССИЯ 1 **Диабет в 2018 году**
Председатели: Александр Аметов (Россия), Ирина Гурьева (Россия)

- 15:00** **Последние научные и клинические достижения в области диабета**
Лешек Чуприяк (Польша)
- 15:30** **Патофизиологический подход в безопасном, эффективном
и долгосрочном управлении диабетом второго типа**
Александр Аметов (Россия)
- 16:00** **Диабет у детей, подростков и молодых взрослых**
Евгения Патракеева (Россия)
- 16:30** **Диабет и старение человека**
Ирина Гурьева (Россия)
- 17:00 – 17:30** **КОФЕ-БРЕЙК**

СЕССИЯ 2 **Современное управление диабетом**
Председатели: Брюс Вольфенбуттел (Нидерланды), Наталья Черникова (Россия)

- 17:30** **Гипогликемия и нарушение ее распознавания**
Брюс Вольфенбуттел (Нидерланды)
- 18:00** **Контроль уровня глюкозы при диабете второго типа – цель, выбор препаратов**
Дарио Рахелич (Хорватия)
- 18:30** **Диабет и женское здоровье**
Ставроула Пасчу (Греция)
- 19:00** **Современные технологии ведения диабета**
Наталья Черникова (Россия)
- 19:30** **ЗАКРЫТИЕ ПЕРВОГО ДНЯ РАБОТЫ**

PROGRAM
V EASD POSTGRADUATE COURSE ON CLINICAL DIABETES
SAINT-PETERSBURG, RUSSIA
12-14 APRIL 2018

Thursday, 12 April 2018

10:00 – 14:30 Registration at Welcome Desk

14:30

OPENING CEREMONY

Elena Grineva, MD, PhD, professor, Director of the Institute of Endocrinology, Federal Almazov North-West Medical Research Centre

Irina Karpova, professor, chief diabetologist of the Healthcare Committee of Saint-Petersburg

Yurii Khalimov, MD, PhD, professor, chief of department, «Military Medical Academy named. S.M. Kirov», chief endocrinologist of the Healthcare Committee of Saint-Petersburg, chief endocrinologist of the Ministry of Defence of Russian Federation

Alsu Zalevskaya, MD, associate professor of the faculty therapy department, First Saint-Petersburg Medical University named after I.P. Pavlov

Leszek Czupryniak, Past Chair of the EASD Postgraduate Education Committee, on behalf of EASD, Poland

Alexander Ametov, MD, professor, on behalf of Russian Medical Academy of Continuous Professional Education of the Ministry of Healthcare of the Russian Federation

Irina Gurieva, MD, professor, on behalf of Local EASD Organizing Committee, Russia

SESSION 1

Diabetes in 2018

Chairs: Alexander Ametov (Russia), Irina Gurieva (Russia)

15:00

Recent milestones in diabetes research and care

Leszek Czupryniak (Poland)

15:30

Pathophysiological approach in type 2 DM safe, efficient and long term management

Alexander Ametov (Russia)

16:00

Diabetes in children, adolescents and young adults

Evgenia Patrakeeva (Russia)

16:30

Diabetes and aging

Irina Gurieva (Russia)

17:00 – 17:30

COFFEE-BREAK

SESSION 2

Modern management of diabetes

Chairs: Bruce Wolffenbuttel (Netherlands), Natalia Chernikova (Russia)

17:30

Hypoglycaemia and hypoglycaemia unawareness

Bruce Wolffenbuttel (Netherlands)

18:00

Glucose control in type 2 diabetes – targets and which drug to use?

Dario Rahelic (Croatia)

18:30

Diabetes and women's health

Stavroula A. Paschou (Greece)

19:00

Morden technologies in diabetes treatment

Natalia Chernikova (Russia)

19:30

CLOSE OF THE 1ST DAY

**ПРОГРАММА V КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ
ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ
ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD)
САНКТ-ПЕТЕРБУРГ, 12-14 АПРЕЛЯ 2018 г.**

Пятница, 13 апреля 2018 г.

СЕССИЯ 3	Лечение диабета – от теории к практике <i>Председатели: Татьяна Каронова (Россия), Сигни Рейнисдоттир (Швеция)</i>
08:30	Предотвращение набора лишнего веса у людей с диабетом через изменение поведения <i>Сигни Рейнисдоттир (Швеция)</i>
09:00	Управление сердечно-сосудистыми рисками при диабете <i>Гржегож Гайоз (Польша)</i>
09:30	Диабет и костная система <i>Татьяна Каронова (Россия)</i>
10:00 – 10:30	КОФЕ-БРЕЙК
10:30 – 13:00	ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ Каждый делегат может посетить 2 из 3 семинаров Каждый семинар длится около 70 минут (10:30 – 11:40 и 11:50 – 13:00) 1. Как управлять ожирением пациента с диабетом <i>Сигни Рейнисдоттир (Швеция), Александр Аметов (Россия)</i> 2. Психология и обучение <i>Франц Поуэр (Дания), Евгения Патракеева (Россия)</i> 3. Практическое управление образом жизни: как вести пациента с сердечно-сосудистыми заболеваниями <i>Гржегож Гайоз (Польша), Александр Яковлев (Россия)</i>
13:00 – 14:00	ОБЕД
СЕССИЯ 4	Хронические осложнения диабета <i>Председатели: Лешек Чуприяк (Польша), Пер Хенрик Груп (Финляндия)</i>
14:00	Клинические исследования у больных диабетом <i>Дарио Рахелич (Хорватия)</i>
14:30	Психологический подход к пациентам с диабетом <i>Франц Поуэр (Дания)</i>
15:00	Новости диабетической нефропатии <i>Пер Хенрик Груп (Финляндия)</i>
15:30 – 16:00	КОФЕ-БРЕЙК
16:00 – 18:30	ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ Каждый делегат может посетить 2 из 3 семинаров Каждый семинар длится около 70 минут (16:00 – 17:10 и 17:20 – 18:30) 1. Перевод пациента с диабетом из педиатрической во взрослую службу <i>Лешек Чуприяк (Польша), Вадим Платонов (Россия)</i> 2. Диабет и беременность <i>Наталья Арбатская (Россия), Зое Стьюарт (Великобритания)</i> 3. Практические аспекты инсулинотерапии и непрерывного мониторинга глюкозы (с пациентами) <i>Пратик Чудхари (Великобритания), Евгения Патракеева (Россия)</i>

PROGRAM
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Friday, 13 April 2018

SESSION 3	Treatment of diabetes – from theory to practice <i>Chairs: Tatiana Karonova (Russia), Signy Reynisdottir (Sweden)</i>
08:30	Preventing weight gain in people with diabetes through behavioral change <i>Signy Reynisdottir (Sweden)</i>
09:00	Cardiovascular risk management in diabetes <i>Grzegorz Gajos (Poland)</i>
09:30	Diabetes and Bone <i>Tatiana Karonova (Russia)</i>
10:00 – 10:30	COFFEE-BREAK
10:30 – 13:00	PARALLEL WORKSHOPS Each delegate can attend 2 of the 3 workshops Each workshop lasts 70 minutes (10:30 – 11:40 and 11:50 – 13:00) <ol style="list-style-type: none"> 1. How to manage an obese patient with diabetes <i>Signy Reynisdottir (Sweden), Alexander Ametov (Russia)</i> 2. Psychology and education <i>Frans Pouwer (Denmark), Evgenia Patrakeeva (Russia)</i> 3. Practical lifestyle management: how to treat patients with ischaemic heart disease <i>Grzegorz Gajos (Poland), Yakovlev Alexander (Russia)</i>
13:00 – 14:00	LUNCH
SESSION 4	Chronic complications of diabetes <i>Chairs: Leszek Czupryniak (Poland), Per Henrik Groop (Finland)</i>
14:00	Clinical research in diabetes – what is and what should it be about? <i>Dario Rahelic (Croatia)</i>
14:30	Psychological approach to patients with diabetes <i>Frans Pouwer (Denmark)</i>
15:00	Update on diabetic nephropathy <i>Per Henrik Groop (Finland)</i>
15:30 – 16:00	COFFEE-BREAK
16:00 – 18:30	PARALLEL WORKSHOPS Each delegate can attend 2 of the 3 workshops Each workshop lasts 70 minutes (16:00 – 17:10 and 17:20 – 18:30) <ol style="list-style-type: none"> 1. Transitioning from pediatric to adult diabetes care <i>Leszek Czupryniak (Poland), Vadim Platonov (Russia)</i> 2. Diabetes, women and pregnancy <i>Natalia Arbatskaya (Russia), Zoe Stewart (UK)</i> 3. Practical aspects of insulin therapy and evolution of CGM (with patients) <i>Pratik Choudhary (UK), Evgenya Patrakeeva (Russia)</i>

**ПРОГРАММА V КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ
ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ
ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD)
САНКТ-ПЕТЕРБУРГ, 12-14 АПРЕЛЯ 2018 г.**

Суббота, 14 апреля 2018 г.

СЕССИЯ 5	Особые ситуации <i>Председатели: Вадим Бреговский (Россия), Лешек Чуприяк (Польша)</i>
08:30	Диабет и беременность <i>Зое Стьюарт (Великобритания)</i>
09:00	Новое в диабетической невропатии и ее последствиях, включая диабетическую стопу <i>Вадим Бреговский (Россия)</i>
09:30	Организация лечения диабета, сейчас и в будущем <i>Лешек Чуприяк (Польша)</i>
10:00 – 10:10	КОФЕ-БРЕЙК
10:10 – 11:20	Семинар «Разбор клинических случаев» Проходит параллельно в 3 залах Каждый делегат может посетить только один семинар <i>Председатели: Лешек Чуприяк (Польша), Ирина Гурьева (Россия); Татьяна Каронова (Россия), Ставроула Пасчу (Греция); Евгения Патракеева (Россия), Пратик Чудхари (Великобритания); Презентации участников-авторов тезисов</i>
11:30 – 14:00	ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ Каждый делегат может посетить 2 из 3 семинаров Каждый семинар длится около 70 минут (11:30 – 12:40 и 12:50 – 14:00) 1. Лечение диабета второго типа: руководства и персонализированная медицина <i>Брюс Вольфенбуттел (Нидерланды), Александр Аметов (Россия)</i> 2. Практические аспекты лечения диабетической невропатии и стопы (с пациентами) <i>Ирина Гурьева (Россия), Вадим Бреговский (Россия)</i> 3. Пациенты с повышенным уровнем креатинина <i>Татьяна Каронова (Россия), Лешек Чуприяк (Польша)</i>
СЕССИЯ 6	Взгляд в будущее <i>Председатели: Ирина Гурьева (Россия), Лешек Чуприяк (Польша)</i>
14:10	Интернет, СМИ, социальные сети – лечение диабета в эпоху цифровых технологий <i>Евгения Патракеева (Россия)</i>
14:40	«Умные» технологии для самоконтроля диабета <i>Пратик Чудхари (Великобритания)</i>
15:10	Диабетическая ретинопатия с точки зрения диабетолога <i>Лешек Чуприяк (Польша)</i>
15:40	ЗАКРЫТИЕ КУРСОВ

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Saturday, 14 April 2018

SESSION 5	Special situations <i>Chairs: Vadim Bregovsky (Russia), Leszek Czupryniak (Poland)</i>
08:30	Diabetes and pregnancy <i>Zoe Stewart (UK)</i>
09:00	Update on diabetic neuropathy and its consequences including diabetic foot <i>Vadim Bregovsky (Russia)</i>
09:30	Organization of diabetes care – now and in future <i>Leszek Czupryniak (Poland)</i>
10:00 – 10:10	COFFEE-BREAK
10:10 – 11:20	Workshops with clinical case discussions Parallel seminars in 3 halls Each delegate can attend only one seminar <i>Leszek Czupryniak (Poland), Irina Gurieva (Russia); Tatiana Karonova (Russia), Stavroula A. Paschou (Greece); Evgenia Patrakeeva (Russia), Pratik Choudhary (UK); Oral presentations of clinical cases</i>
11:30 – 14:00	PARALLEL WORKSHOPS Each delegate can attend 2 of the 3 workshops Each workshop lasts 70 minute (11:30 – 12:40 и 12:50 – 14:00) 1. Type 2 management. Guidelines and personalized medicine <i>Bruce Wolffenbuttel (Netherlands), Alexandr Ametov (Russia)</i> 2. Practical aspects of diabetic neuropathy and foot care (with patients) <i>Irina Gurieva (Russia), Vadim Bregovsky (Russia)</i> 3. Patient with elevated serum creatinine <i>Tatiana Karonova (Russia), Leszek Czupryniak (Poland)</i>
SESSION 6	A look into the future <i>Chairs: Irina Gurieva (Russia), Leszek Czupryniak (Poland)</i>
14:10	Internet, media, social networks – diabetes care in digital era <i>Evgenya Patrakeeva (Russia)</i>
14:40	Smart technology for diabetes self-care <i>Pratik Choudhary (UK)</i>
15:10	Diabetic retinopathy from the GP's perspective <i>Leszek Czupryniak (Poland)</i>
15:40	CLOSING CEREMONY

**Д.м.н., профессор Гринева Елена Николаевна
Директор Института эндокринологии НМИЦ
им. В.А. Алмазова**

Директор Института эндокринологии, главный научный сотрудник НИЛ нейро-эндокринологии, главный внештатный специалист эндокринолог по Северо-Западному федеральному округу, д.м.н., профессор. Закончила Первый Ленинградский медицинский институт в 1983 году. По окончании аспирантуры в 1991 году защитила кандидатскую диссертацию на тему «Активность ядрышков организаторов тироцитов у больных диффузным токсическим зобом, хроническим аутоиммунным тиреоидитом и узловыми образованиями щитовидной железы». Одна из первых в Петербурге (тогда Ленинграде) освоила тонкоигольную аспирационную биопсию щитовидной железы и цитологическую диагностику и внедрила её в повседневную практику. В 2004 году защитила докторскую диссертацию на тему «Узловые образования щитовидной железы. Диагностика и врачебная тактика». С 2008 года под её руководством в Институте эндокринологии ФГБУ «НМИЦ им. В.А. Алмазова» Минздрава России успешно изучаются вопросы диагностики и лечения заболеваний гипофиза и надпочечников а также проблемы ведения беременных с эндокринными заболеваниями. В 2009 году возглавила Институт эндокринологии Центра Алмазова. С 1999 года по настоящее время руководит курсом эндокринологии для врачей в СПбГМУ им. И.П. Павлова. Является членом Европейской ассоциации по щитовидной железе, членом Европейской ассоциации нейроэндокринологов. Е.Н. Гринева награждена нагрудным знаком «Отличник здравоохранения».

Elena Grineva – Director of the Institute of Endocrinology, the Chief endocrinologist of the North-West Federal District, MD, Professor. She graduated from the First Leningrad Medical Institute (Pavlov State University) in 1983. After postdoctoral study graduation in 1991, Dr. Grineva defended her thesis on Active nucleolar organizers thyrocytes in patients with diffuse toxic goiter, chronic autoimmune thyroiditis and thyroid nodules. One of the first in St. Petersburg (then Leningrad) she has mastered the needle aspiration biopsy of the thyroid gland and the cytological diagnosis and introduced it into daily practice. In 2004 she defended her doctoral thesis on «Thyroid nodules. Diagnosis and medical tactics». Since 2008, under her leadership at the Institute of Endocrinology of Federal Almazov North-West Medical Research Centre the issues of diagnosis and treatment of diseases of the pituitary and adrenal glands as well as problems for pregnant women with endocrine diseases were successfully explored. In 2009 Elena Grineva became the head of the Institute of Endocrinology of Federal Almazov North-West Medical Research Centre. From 1999 to now she holds a course in endocrinology for doctors in Pavlov State Medical University. Professor Grineva is a member of the European Thyroid Association, a member of the European Association of Neuroendocrinologists.

**Prof. Leszek Czupryniak
Professor, Department of Internal Medicine and Diabetology
Medical University of Lodz, Poland**

Dr. Leszek Czupryniak is a physician researcher, involved mostly in clinical studies on pathogenesis and treatment of type 2 diabetes mellitus, hypertension and obesity, with particular interest in mechanisms responsible for their co-existence. He has been also investigating cardiovascular risk factors in diabetes and obese subjects, including endothelial dysfunction studies in vivo and obstructive sleep apnoea syndrome. He graduated from Medical University of Lodz, Poland, in 1994, is a specialist in internal medicine and diabetology, completed his doctorate thesis on homocysteine metabolism in type 2 diabetes in 2001, and habilitation thesis on blood pressure regulation in type 2 diabetes and obesity in 2008. His medical and research training included scholarship or courses at the United Kingdom Prospective Diabetes Study centre (Oxford Centre for Diabetes, Endocrinology and Metabolism) in Oxford (UK), Maastricht (the Netherlands), King's College, London (UK), Miami (USA). Dr. Czupryniak is past president of Diabetes Poland and a member of the Executive Committee of the European Association for the Study of Diabetes (EASD), Chair of the EASD Postgraduate Education Committee. In 2000-08 he was an active member of the EASD Hypertension in Diabetes Study Group, in 2007 was elected to the Executive Committee of the Group. Since 2004 he has organized biannually Minkowski Postgraduate Course in Clinical Diabetes in Wroclaw (Breslau) in Poland. Author or co-author of 96 original papers published in international journals including Diabetes Care, Diabetic Medicine, Journal of Clinical Endocrinology and Diabetes, American Journal of Hypertension. Also authored or co-authored 73 reviews and 21 bookchapters. Member of the Editorial Consultant Board at The Lancet, the Editorial Board of the Diabetes, Obesity and Metabolism and the Editorial Board of Cardiovascular Endocrinology. For 14 years he was a managing editor of the Polish Journal of Diabetology, the first diabetes scientific journal in Poland. He is a member of several national and international professional medical associations, including ADA. More privately, he is an avid collector of diabetes memorabilia, and inspired by Michael Bliss' book «Discovery of Insulin» in 2003 and 2004 he conducted research and published the account of the history of the beginnings of insulin production in Poland in 1924.

Профессор Лешек Чуприняк, врач-исследователь, профессор кафедры внутренних болезней и диabetологии Медицинского Университета г. Лодзь, Польша. Приглашается для проведения клинических исследований патогенеза и лечения больных диабетом 2 типа, артериальной гипертензии и ожирения. Занимался исследованием

сердечно-сосудистых факторов риска при диабете и ожирении. Закончил Медицинский Университет в г. Лодзь, Польша, в 1994 году, по специальности «Внутренние болезни и диабетология», защитил докторскую диссертацию на тему нарушения метаболизма при СД 2 типа в 2001 году и докторскую диссертацию по регулированию артериального давления при СД 2 типа и ожирении в 2008 году. Проходил обучение по клиническим научным исследованиям в Оксфордском Центре Эндокринологии и Обмена Веществ (Великобритания), учебных центрах в Маастрихте (Нидерланды), Королевском колледже Лондона (Великобритания), учебном центре в Майами (США). До настоящего времени занимал пост президента Диабетического Общества Польши, является членом исполнительного Комитета Европейской ассоциации по изучению диабета (EASD), занимает пост председателя Комитета последипломного образования EASD. В период с 2000 по 2008 годы – активный член группы по изучению хронического повышенного давления у больных диабетом, в 2007 году был избран в исполнительный комитет группы. С 2004 года является организатором курсов имени Оскара Миньковского по последипломному образованию по клиническому диабету во Вроцлаве, Польша, которые проводятся раз в 2 года. Автор 96 собственных работ и соавтор более 140 статей, опубликованных в международных журналах, таких как Diabetes Care, Diabetic Medicine, Journal of Clinical Endocrinology and Diabetes, American Journal of Hypertension. Автор 73 обзоров и 21 частей в изданиях. Член правлений различных обществ и редакций в области диабета, кардиоваскулярной эндокринологии, гипертонии, осложнений при диабете. Последние 14 лет является редактором Польского журнала по диабету, ведущего специализированного журнала Польши. Является членом медицинских ассоциаций. Собирает материалы, связанные с историей лечения диабета, в частности вдохновленный книгой Michael Bliss «Открытие Инсулина», изучил и опубликовал книгу об истории и начале производства инсулина в Польше в 1924.

Д.м.н., профессор Гурьева Ирина Владимировна
Заведующая сектором медико-социальной экспертизы и реабилитации
при эндокринных заболеваниях ФГБУ Федеральное бюро медико-социальной
экспертизы Минтруда России, профессор кафедры эндокринологии
и диабетологии Российской медицинской академии последипломного образования

Является профессором кафедры эндокринологии РМАПО и заведует сектором медико-социальной экспертизы и реабилитации ФБ МСЭ. Практикующий врач-эндокринолог, врач кабинета диабетической стопы. Окончила 1 Московский медицинский институт им. И.М. Сеченова, обучалась в клинической ординатуре по эндокринологии ЦОЛИУВ, защитила кандидатскую диссертацию по проблемам гипотиреоза и докторскую по синдрому диабетической стопы, включая аспекты экспертизы и реабилитации. Прошла обучение по диабетической стопе в Университетской клинике Женевы и Королевском Госпитале Манчестера, прослушала курс Роберта Тернера для молодых ученых в Оксфорде, Курс по реабилитационным технологиям в Университете Вирджинии. С 1991 года деятельность посвящена организации и развитию междисциплинарной помощи больным диабетом и диабетической стопой в России. С 1991 г. – директор некоммерческой организации «Центр «Диабетическая стопа» Международной программы «Диабет». Основное направление деятельности Центра – профилактическая, лечебная и реабилитационная помощь больным сахарным диабетом и диабетической стопой, профилактика ампутаций, научные исследования и последипломная подготовка врачей. Область научных интересов и публикаций – диабетическая автономная и сенсорная нейропатия, диабетическая стопа, осложнения диабета, медико-социальная экспертиза и реабилитация больных с эндокринными заболеваниями. Избиралась членом Комитета Европейской ассоциации по изучению диабета (EASD) 2003-2007, членом Комитета Группы по изучению диабетической стопы (2001-2008), является представителем России в Международной рабочей группе по диабетической стопе (IWGDF) – секции Международной Федерации по Диабету. Является рецензентом международных журналов: Diabetes Medicine (UK), Diabetes Science and Technology (US), членом редакционной коллегии журналов Diabetic Foot Journal (UK), «Эндокринология: новости, мнения, обучение». Автор более 180 статей. С 2007 года организовала четыре курса последипломного образования по клиническому диабету EASD в России (2007, 2012, 2014, 2016 гг.), а также несколько крупных международных симпозиумов по диабетической стопе в России. Участница и руководитель научной программы медико-биологических исследований женской высокоширотной полярной лыжной антарктической экспедиции 1988-1989 гг.



Professor, Dr. Irina Gurieva - Head of department of Endocrinology, Federal Bureau of Medical and Social Expertise for people with disabilities, professor of department of Endocrinology and Diabetology, Russian Medical Academy of Postgraduate Education. She is a practising doctor endocrinologist and diabetic foot specialist. She was trained in diabetic foot in University Clinic of Geneva, Manchester Royal Infirmary and University of Virginia (rehabilitation and technology). She is a Director of «Diabetes Foot Centre» of «International Diabetes Programm» since 1991, she is a national representative in International Working Group of Diabetic Foot. She was elected as Council Member of European Association for the study of Diabetes (EASD) (2003-07) and as Committee Member of Diabetic Foot Study Group of EASD (DFSG) (2001-08). Fields of research interests: diabetic foot, diabetic sensory-motor and autonomic neuropathy, diabetic complications. She is author of 180 publications. She is reviewer of Diabetes Medicine (UK), Diabetes Science and Technology (US), member of editorial board of Diabetic Foot Journal (UK). She organized several International Diabetic Foot meetings (2005, 2008, 2011) and four Postgraduate Courses in Diabetes for EASD (2007, 2012, 2014, and 2016) in Russia. She participated in several polar expedition, head of biomedical research program of women expedition in Antarctica in 1988-89.

**Д.м.н., профессор Аметов Александр Сергеевич
Заведующий кафедрой эндокринологии
Российской медицинской академии непрерывного
профессионального образования**

Главные научные исследования последних лет направлены на изучение вопросов патогенеза, диагностики, лечения диабета, а также разработку мер профилактики этого заболевания. Автор более 750 печатных работ. Автор 14 изобретений и патентов, в том числе 5 международных. Лауреат Государственной Премии БССР за разработку и создание радиоиммунологических наборов для определения ряда гормонов и онкомаркеров. Член Президиума Всероссийского общества эндокринологов, Президент МОО «Международная программа Диабет», Член Европейской ассоциации по изучению диабета (EASD), Председатель Комитета по образованию Российской Ассоциации Эндокринологов. Член Всемирной Федерации Диабета. Главный редактор международных журналов «Диабет. Образ жизни» и «Диабетография», журнала «Эндокринология: новости, мнения, обучение». Член редколлегии и редсоветов журналов «Остеопороз и остеопатия», «Consilium Medicum», «Сахарный диабет», «Русский медицинский журнал», «Ожирение и метаболический синдром».



Professor, Dr. Alexander Ametov – Head of the department of endocrinology, Russian Medical Academy of Continuous Professional Education of Ministry of Health of Russia. The main scientific researches of the last years are focused on study of pathogenesis, diagnostics, diabetes treatments, and development of measures of prevention of the disease. Author of more than 750 publications and books. Author of 14 inventions and patents, including 5 international. The winner of the State Award BSSR for development and creation of radio immunological sets for definition of a number of hormones and oncomarkers. Member of Presidium of the All-Russian Society of Endocrinology, President of MOO «International Diabetes Program». The member of the European Association for the Study of Diabetes (EASD), Chairman of Committee on Education of the Russian Association of Endocrinology. Member of the World Federation of Diabetes. Editor-in-chief of the international magazines «Diabetes. Way of life» and «Diabetografiya», magazine «Endocrinology: news, opinions, training». Member of editorial boards of journals «Osteoporosis and Osteopathy», «Consilium Medicum», «Diabetes», «The Russian Medical magazine», «Obesity and metabolic syndrome».

**Grzegorz Gajos, MD, PhD
Professor at the Jagiellonian University Medical College
and a Consultant Cardiologist at John Paul II Hospital
in Krakow, Poland**

His scientific interests are atherosclerosis and thrombosis in patients with coronary artery disease and diabetes. He has published in the Journal of American of College of Cardiology, Arteriosclerosis, Thrombosis and Vascular Research, European Heart Journal, Cardiovascular Diabetology etc. He is a Vice Editor-in-Chief of a major Polish medical journal – Polish Archives of Internal Medicine (IF 2.1).



Доктор Гржегож Гайоз – профессор медицинского колледжа Ягеллонского Университета и консультант по вопросам кардиологии при госпитале имени Папы Иоанна Павла II в г. Краков, Польша. Научные интересы доктора Гайоз – изучение атеросклероза и тромбоза у пациентов с заболеваниями коронарных артерий и диабета. Имеет публикации в журнале Американской коллегии по кардиологии, изучению атеросклероза, тромбоза и заболеваний сосудов, в журнале European Heart Journal, журнале Сердечно-сосудистые заболевания при диабете и других. Является заместителем главного редактора ведущего журнала по медицине Польши – Polish Archives of Internal Medicine (Польские исследования по внутренним болезням).

**Per Henrik GROOP
Professor of Nephrology (Chair) at the University of Helsinki,
Chief Physician at the Division of Nephrology, Helsinki
University Central Hospital**

Professor Per Henrik GROOP, MD, DMSc graduated from the University of Helsinki in 1982. He defended his thesis on «The relationship between GIP and beta-cell function in man» in 1989.

After postdoctoral studies at the Guy's Hospital, University of London under Professor Giancarlo Viberti he returned to Helsinki as Consultant of Nephrology. He is Professor of Nephrology (Chair) at the University of Helsinki, Chief Physician at the Division of Nephrology, Helsinki University Central Hospital as well as Head of the Department of



Diabetes Genetics at the Folkhälsan Research Center in Helsinki, Finland. He is also Professor at the Baker Heart & Diabetes Institute in Melbourne, Australia. His research is focused on the dissection of the pathogenesis of diabetic complications with special emphasis on diabetic nephropathy. In order to provide a unique set of clinical resources with high power to identify genes and genetic variants associated with diabetic complications, professor Groop initiated the large, nation-wide Finnish Diabetic Nephropathy Study (FinnDiane) in 1997. To date this landmark study comprises 5000 patients with type 1 diabetes and their family members recruited via a comprehensive network of 92 hospitals and health care centers throughout Finland. His FinnDiane Research Group represents an inter-disciplinary team of 38 scientists, post-graduate students and personnel. He was awarded the prestigious EASD Castelli Pedrolì Prize – 24th Camillo Golgi Lecture in 2009. Professor Groop served as Associate Editor of Diabetologia 2005-2007, and served as Honorary Secretary of the EASD.

Профессор Пер Хенрик Гроуп окончил Университет в Хельсинки в 1982 году. В 1989 году защитил диссертацию на тему «Связь между GIP и функционированием бета-клеток у мужчин».

После ординатуры в госпитале Гая Университета Лондона под руководством профессора Жанкарло Виберти вернулся в Хельсинки и начал работать консультантом по нефрологии.

В настоящее время является профессором нефрологии (возглавляет кафедру) Университета Хельсинки, главным врачом Отделения нефрологии Университета Хельсинки, а также возглавляет Отделение по генетике диабета в исследовательском центре Фольхалсан в Хельсинки, Финляндия. Также является профессором Института диабета и болезней сердца в Мельбурне, Австралия.

Исследования профессора Гроуп сфокусированы на анализировании причин возникновения осложнений при диабете, особенно нефропатии. Для того, чтобы обеспечить уникальный комплекс клинических исследований с целью идентифицировать гены и генетические изменения, связанные с осложнениями при диабете, профессор Гроуп инициировал большое национальное исследование в Финляндии по изучению нефропатии в 1997 году. Исследование охватило 5000 пациентов с диабетом 1 типа и членов их семей через сеть из 92 госпиталей и заведений здравоохранения по всей Финляндии. Эта исследовательская группа представляла команду из 38 специалистов по разным дисциплинам, включая ученых, студентов и другого персонала. Профессор Гроуп был награжден престижной наградой Европейской ассоциацией по изучению диабета – Castelli Pedrolì Prize – 24th Camillo Golgi Lecture в 2009. Профессор Гроуп являлся редактором журнала Диabetologia с 2005 по 2007 годы и Ученым секретарем Европейской ассоциации по изучению диабета.

Frans Pouwer **Professor of Medical Psychology**

Frans Pouwer is professor of Medical Psychology, he is affiliated to the South Danish University in Odense, Denmark.

His work is primarily focused on clinically relevant topics, such as diabetes-specific emotional distress, stress in general, depression, diabetes self-care, fear of hypoglycaemia, and appraisals of insulin therapy. Frans Pouwer is past chair of the Psychosocial Aspects of Diabetes (PSAD) study group of the EASD an also past chair of the European Depression in Diabetes (EDID) research consortium.

Доктор Франц Поуэр - профессор по специальности «медицинская психология».

Работает при Южно-Датском университете в г. Оденсе, Дания.

Занимается вопросами, связанными с клиническими темами, такими как эмоциональный стресс, связанный с диабетом, депрессивные состояния больных диабетом, самопомощь больных диабетом, страх гипогликемии и анализ инсулинотерапии. Возглавлял Группу по изучению психологических аспектов при диабете Европейской ассоциации по изучению диабета и Европейский исследовательский консорциум, занимающийся проблемами депрессий при диабете.



К.м.н., Карпова Ирина Альбертовна **Главный диабетолог Комитета по здравоохранению** **Правительства Санкт-Петербурга**

Карпова Ирина Альбертовна, врач-эндокринолог, КМН, высшая квалификационная категория, отличник здравоохранения, главный внештатный специалист по диабетологии Комитета по здравоохранению Правительства Санкт-Петербурга Закончила 1-й Ленинградский медицинский институт им. И.П. Павлова, факультет «лечебное дело», в 1984 году. Заведующий центром, врач-эндокринолог – СПб ТДЦ – Санкт-Петербургский территориальный диабетологический центр.

Irina Karpova, professor, chief diabetologist of the Healthcare Committee of Saint-Petersburg.

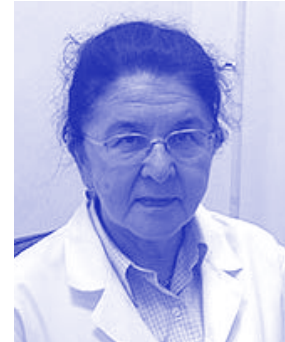
Irina Karpova Irina – endocrinologist. Graduated from the 1st Leningrad Medical Institute named Pavlov, faculty «medical care», in 1984. Head of the centre – St. Petersburg territorial diabetes centre, the doctor-endocrinologist centre.



К.м.н., Залевская Алсу Гафуровна
Доцент кафедры факультетской терапии Первого
Санкт-Петербургского государственного медицинского
университета им. акад. И.П. Павлова

Врач-эндокринолог. Ученая степень – кандидат медицинских наук. Доцент кафедры факультетской терапии СПбГМУ им. акад. И.П. Павлова.

В 1973 году с отличием закончила Первый Ленинградский Медицинский институт им. акад. И.П. Павлова. С 1973 г. по 1975 г. обучалась в клинической ординатуре по эндокринологии, кафедра факультетской терапии СПбГМУ им. акад. И.П. Павлова. С 1975 г. по 1977 г. работала врачом-эндокринологом поликлиники при Первом Ленинградском Медицинском институте им. акад. И.П. Павлова. С 1978 г. по 1981 г. – аспирантура по эндокринологии, кафедра факультетской терапии СПбГМУ им. акад. И.П. Павлова. С 1981 г. – доцент кафедры факультетской терапии СПбГМУ им. акад. И.П. Павлова. С 1989 г. по 2001 г. занимала должность главного эндокринолога СПб.



Alsu Zalevskaya, MD, associate professor of the faculty therapy department, First Saint-Petersburg Medical University named after I.P. Pavlov.

In 1973 graduated from the 1st Leningrad Medical Institute named after I.P. Pavlov. Since 1973 till 1975 continued her education in in endocrinology at the Department of faculty therapy of same Institute. Since 1975. in 1977 was as a consultant endocrinologist of the ambulance of the 1st Leningrad Medical Institute named I.P. Pavlov. From 1978 to 1981 got postgraduate education in endocrinology at the Department of faculty therapy 1st Leningrad Medical Institute named after I.P. Pavlov. Since 1981 – associate professor of faculty therapy department on the Medical University named I.P. Pavlov. Since 1989 till 2001 had a position of chief endocrinologist of St. Petersburg.

К.м.н., Патракеева Евгения Михайловна
Ассистент кафедры факультетской терапии Первого
Санкт-Петербургского Медицинского Университета
им. акад. И.П. Павлова (ПСПбГМУ), врач-эндокринолог

Окончила с отличием ПСПбГМУ в 2005 году, интернатуру и клиническую ординатуру проходила на кафедре факультетской терапии ПСПбГМУ (зав. Курсом эндокринологии – Залевская А.Г.).

Научные интересы: вопросы инсулинотерапии, терапевтического обучения пациентов, психологических аспектов в лечении сахарного диабета, применение новых технологий в диабетологии, а также использование веб-ресурсов и социальных сетей как инструмента образовательной поддержки диабетологов (является членом редакционного совета образовательного ресурса www.diaeuni.com, созданного при участии РЭНЦ) и пациентов с сахарным диабетом (член команды проекта www.rule15s.com и аккаунтов @diabet.connect в социальных сетях).

Результаты научных работ неоднократно докладывались на российских и международных конференциях. Организатор курса непрерывного постдипломного обучения молодых диабетологов Санкт-Петербурга с целью трансляции итогов современных научных исследований в клиническую практику, а также образовательного курса для пациентов, использующих ППИИ и готовящихся к переходу на ППИИ.

Член Российской Ассоциации Эндокринологов, Европейской Ассоциации по изучению сахарного диабета (EASD), Американской Диабетологической Ассоциации.



Dr. Evgenia Patrakeeva – teaching Assistant in Endocrinology and Consultant Endocrinologist, First Saint-Petersburg Medical University named after I.P. Pavlov.

Received her medical degree from First Saint-Petersburg Medical University named after I.P. Pavlov in 2005, where she graduated cum laude and completed her residency in endocrinology and internal medicine at faculty therapy department of this University. Research interests include insulin therapy, patient education, psychological issues in diabetes care, the use of new technologies in diabetes. She also has an interest in development of web-based resources and social media use as components of diabetes therapy and patients' psychological support. Since 2012 has been a member of advisory board of the educational site for Russian diabetologists (www.diaeuni.ru), supported by Russian Endocrinology Scientific Center. Co-founder of educational web-resource (www.rule15s.com) and educational social networks account for Russian-speaking diabetes patients (@diabet.connect).

Results of her research were presented at international and local Russian conferences.

She has organized on a regular basis the course of continuous postgraduate education for young diabetologists in Saint-Petersburg with the aim of recent international research findings translation into everyday clinical practice. Innovative educational course for CSII and ready-for-CSII young patients was also organized with Dr. Patrakeeva's support and personal participation.

Member of Russian Endocrinology Society, European Association for Study in Diabetes (EASD) and American Diabetes Association (ADA).

К.м.н., Арбатская Наталья Юрьевна
Врач-эндокринолог, кандидат медицинских наук

Окончила в 1997 г. Владивостокский Государственный Медицинский Университет. Клиническая ординатура по специальности «эндокринология» на базе кафедры эндокринологии ММА им. И.М. Сеченова в 1997-1999 г. Защита диссертации по теме: «Сахарный диабет и беременность». Работала в ГКБ № 1 им. Н.И. Пирогова с 2000 по 2012 гг. Занимается научно-исследовательской работой в области «Сахарный диабет и беременность» на базе кафедры эндокринологии и диабетологии факультета усовершенствования врачей Российского научно-исследовательского медицинского университета с 2003 г. по н.в. Сертифицированный специалист по диабетологии, тиреологической, помповой инсулинотерапии и круглосуточному мониторингу глюкозы в терапии различных типов сахарного диабета.



Dr. Natalia Arbatskaya - doctor-endocrinologist. Candidate of medical sciences. Graduated from Vladivostok State Medical University in 1997. Clinical internship in «Endocrinology» at MMA named I.M.Setchenov in 1997-1999. Defended thesis on a subject: «Diabetes and pregnancy». Worked at the Hospital named Pirogov from 2000 till 2012. Engaged in research for diabetes and pregnancy on the basis of endocrinology dept. of postgraduate education in medicine at the Russian Research Medical University since 2003. The certified expert in a diabetology, tireoidologiya, pump insulinotherapy and glucose everyminute monitoring.

Pratik Choudhary

Dr Choudhary's main research work is based around mechanisms and treatments of hypoglycaemia unawareness, with a special interest in the psychology of patients with recurrent hypoglycaemia, and the changes in the brain that are associated with that seen on neuroimaging.

He is also interested in the use of technology in diabetes, with a large clinical and research interest in the use of insulin pumps, continuous glucose monitoring and closed loop insulin delivery. He is also clinical lead for the islet transplant service at King's, and diabetes lead for the pancreas transplantation at Guy's Hospital.



Доктор Прадик Чудхари. Основная исследовательская работа Доктора Чудхари базируется на исследовании механизмов и лечении гипогликемии, особенный интерес – психология пациентов с рецидивирующей гликемией и изменения в сознании, которые ассоциируются с понятием нейровизуализация. Доктор Чудхари также занимается изучением внедрения современных технологий в диабете, в частности инсулиновых помп, постоянного мониторинга уровня глюкозы и доставки инсулина замкнутого цикла. Доктор Чудхари ведет клинические исследования по трансплантации бета-клеток в Королевском госпитале и исследования по пересадке поджелудочной железы при диабете в Госпитале Гая в Лондоне.

Dr. Zoe Stewart
Clinical Research Fellow in diabetes in pregnancy,
University of Cambridge, UK

Dr. Zoe Stewart is a Clinical Research Fellow in diabetes in pregnancy at the University of Cambridge, where she is completing a PhD examining new treatments for type 1 diabetes in pregnancy under a Gates Cambridge Scholarship and a Jean Hailes Fellowship for Emerging Clinical Leaders in women's health. Dr Stewart has numerous publications in the field of diabetes in pregnancy, and is a regular peer-reviewer for a range of general, diabetes, and women's health journals. Her area of focus is research and clinical work related to gestational diabetes and type 1 and type 2 diabetes in pregnancy, as well as the use of insulin pumps, continuous glucose monitors, and closed-loop systems, and she is committed to improving health outcomes for women and their children.



Доктор Зое Стюарт – научный сотрудник в области диабета беременных Кембриджского Университета, получила звание кандидата наук по исследованиям новых подходов в лечении диабета 1 типа у беременных. Имеет многочисленные публикации по диабету беременных в специализированных журналах. Область исследований – гестационный диабет и диабет 1 и 2 типа у беременных, а также использование инсулиновых помп, непрерывный мониторинг уровня глюкозы с целью улучшения состояния здоровья у беременных и детей.

Д.м.н., профессор Халимов Юрий Шавкатович
Начальник кафедры военно-полевой терапии ФГКОУ ВПО
«Военно-медицинская академия им. С.М. Кирова»,
главный эндокринолог Комитета по здравоохранению
Правительства Санкт-Петербурга, главный эндокринолог
Министерства обороны РФ



Доктор медицинских наук. Член правления Ассоциации эндокринологов Санкт-Петербурга. Член правления Санкт-Петербургского общества терапевтов им. С.П. Боткина. Заслуженный врач Российской Федерации, полковник медицинской службы. Окончил Военно-медицинскую академию имени С.М. Кирова. В 2003 году защитил докторскую диссертацию на тему: «Функциональные аспекты диабетической кардиоваскулярной вегетативной нейропатии». Область научных интересов: профилактика и лечение сахарного диабета 1 и 2 типа, осложнения сахарного диабета, сердечно-сосудистая безопасность противодиабетических препаратов.

Yurii Khalimov, MD, PhD, professor, chief of department, «Military Medical Academy named S.M. Kirov», chief endocrinologist of the Healthcare Committee of Saint-Petersburg, chief endocrinologist of the Ministry of Defence of Russian Federation. Member of the Board Of the Association of endocrinologists of St. Petersburg. Member of the Board of St. Petersburg society of therapists. named S. P. Botkin. Honored doctor of the Russian Federation, Colonel of medical service. He graduated from the Military medical Academy named S. M. Kirov. The topic of his thesis for PhD degree in medicine (2003) is «Functional aspects of diabetic cardiovascular autonomic neuropathy». Research interests: prevention and treatment of diabetes type 1 and 2, complications in diabetes.

Бреговский Вадим Борисович
Доктор медицинских наук



Закончил Ленинградский педиатрический медицинский институт в 1989 г. После ординатуры по эндокринологии в СПб Медицинском Университете им. акад. И.П.Павлова с 1994 по 1996 гг. – врач отделения эндокринологии городской многопрофильной больницы №2, Санкт-Петербург. С 1996 г. работает врачом кабинета «Диабетическая стопа» СПб Территориального диабетологического центра, совмещающая с 2013 г. по настоящее время должность руководителя Санкт-Петербургского регистра больных сахарным диабетом. С 2012 по 2016 гг. – ведущий научный сотрудник Института эндокринологии НМИЦ им. В.А. Алмазова. В 1998 г. защитил кандидатскую диссертацию на тему нарушений кожной микроциркуляции при диабетической полинейропатии у больных сахарным диабетом 1 типа. Докторская диссертация посвящена ближайшему и отдалённому прогнозу у больных с синдромом диабетической стопы (2007 г.). Научные и практические интересы: диабетическая нейроостеоартропатия, биомеханика стоп при сахарном диабете, применение компьютерной педографии, методы разгрузки конечности, ортопедическая обувь, организация специализированной помощи больным с поражениями нижних конечностей на догоспитальном этапе, регистры сахарного диабета и диабетической стопы. Прилагает большие усилия к налаживанию взаимодействия между протезно-ортопедическими организациями города и врачами кабинетов «Диабетическая стопа». Совместно с НМИЦ им. В.А. Алмазова организовал цикл последипломного обучения по теме «Синдром диабетической стопы и другие поражения нижних конечностей при сахарном диабете». Автор более 50 печатных работ, а также монографии «Поражения нижних конечностей при сахарном диабете». Член Группы по изучению диабетической стопы при Европейской Ассоциации по изучению диабета.

Bregovskiy Vadim, P.h.d. Graduated from Leningrad pediatric medical Institute in 1989. He passed primary specialization in endocrinology, St. Petersburg MAPO in 1990, then worked as an endocrinologist at the out-patient clinic. After graduation from residency in endocrinology at St. Petersburg Medical University. Acad. I.P. Pavlova from 1994 to 1996-doctor of endocrinology Department of the city multidisciplinary hospital № 2, St. Petersburg.

Since 1996 he has been working as a doctor of the office «Diabetic foot» of St. Petersburg Territorial diabetological center, combining from 2013 to the present position of the head of the St. Petersburg register of patients with diabetes. From 2012 to 2016-leading researcher At the Institute of endocrinology of National Medical research Center named V.A. Almazov. In 1998 he defended his first degree on disorders of skin microcirculation in diabetic polyneuropathy in patients with diabetes mellitus type 1. The doctoral dissertation was devoted to the short-and long-term prognosis in patients with diabetic foot syndrome (2007).

Scientific and practical interests: diabetic neuroosteoarthropathy, the foot biomechanics in diabetes, the use of computer pedography, methods of unloading of the foot, orthopedic shoes, organization of specialized care to patients with diabetic foot in the out-patient setting, registers of diabetes and diabetic foot. With collaboration with NRC named after V.A. Almazov organized a series of postgraduate training on the «Diabetic foot Syndrome and other disorders of the lower extremities in diabetes mellitus». Author of more than 50 articles, as well as a monograph «Pathology of the lower extremities in diabetes mellitus». The member of the Diabetic Foot Study Group of EASD.

Д.м.н., Каронова Татьяна Леонидовна
Зав. НИЛ клинической эндокринологии, Северо-Западный
Федеральный Медицинский Исследовательский Центр
им. В. А.Алмазова, Санкт-Петербург, Россия

Закончила СПбГМУ им. акад. И.П. Павлова, где в последующем проходила интернатуру и клиническую ординатуру на кафедре терапии факультетской с курсом эндокринологии. С 1998 по 2003 г. год работала врачом-эндокринологом, а после аспирантуры с 2003 г. по настоящее время – ассистентом и доцентом кафедры. Преполагает эндокринологию студентам Университета, врачам на цикле повышения квалификации. С 2008 г. является сотрудником НИЛ эндокринологии ФМИЦ им. В.А. Алмазова, а с 2014 г. возглавляет НИЛ клинической эндокринологии Института эндокринологии. С 2006 года Каронова Т.Л. проводит исследование по изучению распространенности дефицита витамина D в Северо-Западном регионе РФ и плейотропных эффектов витамина D. Результаты проведенного исследования вошли в материал докторской диссертации и клинических рекомендаций Российской ассоциации эндокринологов по диагностике, профилактике и лечению дефицита витамина D. Активно публикуется в отечественных, а также в зарубежных журналах. Является автором более 100 статей, тезисов, пособий. Член Российской Ассоциации эндокринологов, Российской Ассоциации остеопороза, член EASD.



MD PhD Karonova Tatiana - Doctor of Medical Sciences, Head of Clinical Endocrinology Laboratory Federal North-West Medical Research Centre, St. Petersburg, Russia. Graduated from St. Petersburg State Medical University n.a. I.P.Pavlov in 1995 and received Endocrinologist certificate in 1998. Worked as endocrinologist in the Endocrinology department at the university hospital. Since 2003 have been working as assistant professor and associated professor in the faculty department in St. Petersburg State Medical University n.a. I.P.Pavlov and have been actively involved in teaching and supervision of medical students, residents and medical doctors at the postgraduate department. Since 2008 actively involved in research works at the Clinical Endocrinology Laboratory in Federal North-West Medical Research Centre, and in 2014 appointed Head of the Clinical Endocrinology Laboratory. Since 2006 have been studying the prevalence of vitamin D deficiency in North-West region of Russia and pleiotropic effects of vitamin D. The results of these studies were included in the dissertation for the Doctor of Medical sciences degree, and in the recommendation of the Russian Association of Endocrinologists on diagnosis, prevention and treatment of vitamin D deficiency. The author of more than 100 papers, thesis and brochure for students, actively published in local and foreign journals. Member of the Russian Association of Endocrinologists, Russian Association of Osteoporosis, and member of EASD.

Dr. Dario Rahelic
Assistant professor and Head of Department of
Endocrinology, Diabetes and Metabolic Disorders

Dr. Rahelic is a physician, internal medicine specialist, endocrinologist and diabetologist who has been engaged in daily clinical practice for 13 years. He is assistant professor and Head of Department of Endocrinology, Diabetes and Metabolic Disorders at Dubrava University Hospital, Zagreb, Croatia, and is President of the Croatian Society for Diabetes and Metabolic Disorders of the Croatian Medical Association. He also serves as Executive Committee Member of the Diabetes and Nutrition Study Group of EASD, the Croatian Endocrine Society, the Croatian Society for Obesity and the Croatian Society for Endocrine Oncology. Dr. Rahelic has published several chapters in national and international books, articles in scientific journals and was invited speaker at many national and international conferences. His teaching engagements are at the Faculty of Medicine, the Faculty of Food Technology and Biotechnology and the Faculty of Pharmacy and Biochemistry. He was visiting scientist at St. Michael's Hospital in Toronto (Canada), Mayo Clinic in Rochester (USA) and Motol Clinic, Prague (Czech Republic).



Dr. Rahelic is a Fellow of the American College of Endocrinology and of the Royal College of Physicians of Edinburgh. He has received awards from the Diabetes and Nutrition Study Group of EASD, from the Croatian Endocrine Society, and the Etwiler Rising Star Award – International Diabetes Center. As President of the Croatian Society for Diabetes and Metabolic Disorders, Dario Rahelic participated in negotiations with the Ministry of health of the Republic of Croatia, the Croatian national insurance company and other authorities to achieve better care for people with diabetes in Croatia. Dr. Rahelic concentrates his activities on improving access to modern diabetes treatment, improvement in patient and HCP education, involvement in parliamentary and other decision-making discussions, and, mostly on improving the quality of life for people with diabetes. He believes that motivating people with diabetes to manage their condition is more effective than only treating complications, but to achieve this the medical professionals must themselves be educated with new information and techniques which can be implemented in daily practice. Dr. Rahelic has been an invited faculty member on numerous EASD Postgraduate Education Courses and is local organiser of the EASD Postgraduate Education Course in Croatia (2014 & 2017).

Доктор Дарио Рахелич – врач, специалист по внутренним болезням, эндокринолог и диабетолог, практикующий 13 лет. Является ассистентом профессора и заведующим Отделения эндокринологии, диабетологии и нарушения обмена веществ Дубравского университетского госпиталя, Загреб, Хорватия. Доктор Рахелич – президент

Хорватского общества диабетологии и нарушения обмена веществ Хорватской медицинской ассоциации. Является членом исполнительного комитета Группы по изучению проблем диабета и питания Европейской ассоциации по изучению диабета, Хорватского эндокринологического общества, Хорватского общества проблем ожирения и Хорватского общества онкологии эндокринной системы. Доктор Рахелич опубликовал несколько глав в национальных и международных изданиях, статей в научных журналах и приглашался в качестве докладчика на национальные и международные конференции. Занимается преподавательской деятельностью на факультете медицины, факультете пищевых технологий и биотехнологий и факультете фармакологии и биохимии. Приглашался в качестве ученого в Институт Св. Михаила в Торонто (Канада) в Клинику Майо в Рочестер (США) и Клинику Мотол в Прагу (Чехия).

Доктор Рахелич является членом Американской коллегии по эндокринологии и Королевской коллегии врачей в Эдинбурге. Имеет награды от Группы по изучению проблем диабета и питания Европейской ассоциации по изучению диабета, Хорватского общества по эндокринологии, премию Эцвилера от Международного диабетического центра. Как президент Хорватского общества диабетологии и нарушения обмена веществ Доктор Рахелич принимал участие в переговорах Министерства здравоохранения Республики Хорватии, Хорватской государственной страховой компанией и другими государственными структурами по обеспечению лучшей медицинской помощи больным диабетом в Хорватии. Доктор Рахелич концентрирует свою деятельность на внедрение современных методов в лечение диабета, улучшение образования пациентов, принимает участие в парламентских слушаниях и дискуссиях по вопросам улучшения качества жизни больных диабетом. Доктор Рахелич утверждает, что мотивирование больных диабетом на управление своим самочувствием более эффективно, чем лечение осложнений, но чтобы достичь этого врачи должны сами быть более образованными в вопросах современных технологий и новых достижений, которые применяются в ежедневной практике. Доктор Рахелич приглашался неоднократно в качестве докладчика на курсы последипломного образования, которые проводит Европейская ассоциация по изучению диабета и является организатором этих курсов в Хорватии (в 2014 и в 2017 году).

К.м.н., Черникова Наталья Альбертовна
Доцент кафедры эндокринологии и диабетологии
ГБОУ ДПО «Российская медицинская академия
последипломного образования Минздрава России»

На кафедре с 1995 года, с 1997 г. – директор Центра «Образ жизни», организованного в эндокринологическом отделении ЦКБ Гражданской авиации под эгидой МОО «Международная программа Диабет». С 2003 г. ведет направление на кафедре по обучению врачей и пациентов новым технологиям в диагностике и лечении сахарного диабета (методы непрерывного мониторинга гликемии (CGMS), помповой инсулинотерапии, глюкокардиомониторированию). С 2010 года разработала и ежемесячно проводит курс обучения для «продвинутых пациентов» с сахарным диабетом. Автор около 100 печатных работ. Член Всероссийского общества эндокринологов, Член Европейской ассоциации по изучению диабета (EASD), Член Американской диабетической ассоциации.



Dr. Natalia Chernikova - associate professor of endocrinology and diabetology department of «Russian Medical Academy of Postgraduate Education of Ministry of Health of Russia». Since 1997 – the director of the Center «Way of life» organized on the basis of Endocrinology Department of Civil Aviation Hospital, the part of «International Diabetes Program». Since 2003 conducts training of doctors and patients of new technologies in diagnostics and diabetes treatment (methods of continuous monitoring of a glycemia (CGMS), a pump insulinotherapy). Since 2010 monthly conducts a course for «the advanced patients» with diabetes. Author about 100 publications. The member of the All-Russian Society of Endocrinology, the Member of the European Association for the Study of Diabetes (EASD), American Diabetic Association.

Платонов Вадим Валерьевич
Детский эндокринолог
Детская городская больница имени Раухфуса

Окончил Санкт-Петербургскую Государственную Педиатрическую Академию в 2003 году. Обучался в клинической ординатуре по педиатрии на кафедре педиатрии с курсами перинатологии и эндокринологии. С 2006 по 2010 год работал над кандидатской диссертацией на тему «Психомоторное и интеллектуальное развитие детей с врожденным гипотиреозом». С 2011 года работает детским эндокринологом в Детской городской больнице имени Раухфуса. До 2013 года завеловал эндокринологическим отделением. С 2014 года работает в городском детском эндокринологическом центре. Проводит обучающие семинары для врачей детских эндокринологов по основам помповой инсулинотерапии, а также обучающие семинары для семей детей больных сахарным диабетом. Постоянно участвует во всех медицинских конференциях по своей



специальности в качестве докладчика, автор нескольких научных работ. Сферу научных интересов составляют вопросы связанные с генезом сахарного диабета, вопросы обучения детей с сахарным диабетом, современные технологии в диabetологии.

Vadim Platonov, graduated from Saint-Petersburg State Pediatric Academy in 2003. He studied in clinical residency in Pediatrics at the Department of Pediatrics with courses of Perinatology and Endocrinology. From 2006 to 2010 he worked on his PhD thesis on «Psychomotor and intellectual development of children with congenital hypothyroidism». He is working as a pediatric endocrinologist at the City Children's hospital №19 in Saint-Petersburg since 2011. Until 2013 he was the head the endocrinology department of this hospital. Since 2014 he has been working in the city children's endocrinology center. Conducts training seminars for doctors children's endocrinologists on the basics of pump insulin therapy, as well as training seminars for families of children with diabetes. Regularly participates in all medical conferences on his specialty as a speaker, author of several scientific works. The sphere of scientific interests includes issues related to the genesis of diabetes, issues of education of children with diabetes, modern technologies in diabetology.

Dr. Signy Reynisdottir
Head of the Unit for Metabolism, Karolinska Institutet, Sweden

During her specialist training, Dr. Reynisdottir worked with many patients who have complications with being overweight, obesity, and in particular type 2 diabetes. Dr. Reynisdottir is currently the head of the Unit for Metabolism at the Karolinska Institutet in Sweden where her focus is on non-surgical treatment of severe obesity.

Доктор Сигни Рейнисдоттир возглавляет кафедру по метаболизму Королевского Института, Швеция.

Работает с больными, которые имеют осложнения из-за избыточного веса, ожирения на фоне диабета 2 типа.



К.м.н., Яковлев Алексей Николаевич
Заведующий НИЛ острого коронарного синдрома
в Национальном медицинском исследовательском
центре имени В.А. Алмазова

Доцент кафедры анестезиологии и реаниматологии, к.м.н. В 1998 году с отличием окончил лечебный факультет Санкт-Петербургского Государственного Медицинского Университета имени акад. И.П. Павлова. В 1999 году вступил на должность врача анестезиолога-реаниматолога отделения реанимации и интенсивной терапии клиники факультетской терапии СПбГМУ. В 2008 году защитил кандидатскую диссертацию на тему «Клиническая эффективность высокодозной терапии глюкозо-инсулиново-калиевой смесью при остром коронарном синдроме без подъёма сегмента ST». С 2009 года с заведующий отделением анестезиологии, реанимации и интенсивной терапии в Национальном медицинском исследовательском центре имени В.А. Алмазова, с 2010 года по настоящее время – руководитель научно-исследовательской лаборатории острого коронарного синдрома. С 2013 года – доцент кафедры анестезиологии и реаниматологии. Практикующий врач-кардиолог. А.Н. Яковлев имеет печатные работы в области вегетативной регуляции кровообращения, артериальной гипертензии, сердечной недостаточности у больных в отдалённом периоде после хирургической реваскуляризации миокарда, острого коронарного синдрома.

Alexey Yakovlev, MD, Head of scientific laboratory of acute coronary syndrome, associate professor of department of anesthesiology and intensive care of Almazov National Medical Research Centre (Saint-Petersburg, Russian Federation), and practicing physician of cardiological intensive care unit. The topic of thesis for PhD degree in medicine (2008) was the acute treatment strategies of acute coronary syndrome (ACS). The current research interests include the treatment of cardiological patients in ICU, development of regional ACS networks and information technologies in acute medical care.



Dr. Stavroula A. Paschou, MD, PhD
Specialist in Endocrinology and Diabetes

Dr. Paschou graduated with Honors from the Medical School of the University of Ioannina, Greece in 2005. She obtained her PhD in Diabetes with Honors from the same University in 2010.

Then, she worked at a post-doctoral level at the Department of Diabetes, St Bartholomew's Hospital, University of London in London, UK, funded by grants from the European Association for the Study of Diabetes (EASD). Dr. Paschou continued with clinical training in Endocrinology and Diabetes at the Hellenic Red Cross Hospital, Athens, Greece.

In 2015, she was awarded the International Endocrine Scholarship by the European Society of Endocrinology (ESE) and moved to Boston, MA, USA. She completed her training in Endocrinology at Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA.

While at Harvard, Dr. Paschou also pursued research at a post-doctoral level in Diabetes, funded by grants from EASD. Currently, Dr. Paschou works at the Division of Endocrinology and Diabetes, «Aghia Sophia» Hospital, Medical School, National and Kapodistrian University of Athens. She participates in the development of an innovative endocrine transition clinic (from pediatric endocrinologist to adult endocrinologist) for adolescents, mainly with type 1 diabetes.

She also teaches Endocrinology and Diabetes at the School of Medicine, European University Cyprus in Nicosia, Cyprus. Dr. Paschou has published a large number of chapters and papers in scientific books and journals in the field of Endocrinology and Diabetes and has presented at many international congresses. She has received prestigious awards and scholarships. Dr. Paschou is also a reviewer in high impact scientific journals and an active member of important scientific societies.



Доктор Пасчу специалист в области эндокринологии и диабетологии. В 2005 году окончила с отличием Медицинскую школу Университета Иоаннина, Греция. Получила степень доктора по диабетологии с отличием того же университета в 2010 году.

Работала в качестве ординатора в Отделении диабета в госпитале Св.Варфоломея при Лондонском университете, Лондон, Великобритания, получила грант от Европейской ассоциации по изучению диабета. Доктор Пасчу продолжила клиническое образование по диабету и эндокринологии в госпитале Красного Креста Греции, Афины. В 2015 году получила стипендию от Европейской ассоциации по эндокринологии и переехала в Бостон, США. Окончила свое образование по эндокринологии в Медицинском центре Бет-Изрэйел Гарвардской медицинской школы, Бостон, США. Будучи в Гарварде, доктор Пасчу также проводила исследования по диабету, которые спонсировались Европейской ассоциацией по клиническому диабету.

В настоящее время доктор Пасчу работает в отделении по эндокринологии и диабету в госпитале «Айя София» при Медицинской школе Национального университета им. Каподистрии в Афинах. Доктор Пасчу принимает участие в развитии инновационной клиники по эндокринологии переходного периода (от детской эндокринологии к взрослой эндокринологии) для подростков с диабетом 1 типа. Доктор Пасчу занимается преподавательской деятельностью по специализации «эндокринология и диабет» в Медицинской школе Европейского университета Кипра, Никосия, Кипр. Доктор Пасчу опубликовала большое количество статей и глав в научных книгах и журналах по эндокринологии и диабету и делала доклады на международных конгрессах. Доктор Пасчу получила несколько престижных наград и стипендий, является рецензентом в научных журналах и активным членом важных международных сообществ.

Bruce HR Wolfenbittel, MD PhD
Professor University Medical Center Groningen,
The Netherlands

Bruce Wolfenbittel is Professor of Endocrinology and Metabolism and Head of the Department of Endocrinology at the University Medical Center Groningen in The Netherlands.

He is also the founder of the LifeLines Cohort Study, a large population-based study examining gene-gene and gene-environment interactions in the development of chronic multifactorial diseases including diabetes, cardiovascular and pulmonary diseases. Professor Wolfenbittel earned his medical degree from the Erasmus University of Rotterdam, The Netherlands, and subsequently worked two years as a research fellow at the Cardiovascular Research Department of the Thoraxcentre in the same institution.

After his training in internal medicine in Rotterdam, he served as Associate Professor of Medicine and Endocrinology at the University Hospital, Maastricht University, The Netherlands, from 1988 to 2002.

His current research interests concern the genetic and biochemical factors and gene-environment interactions responsible for the development of both type 1 and type 2 diabetes, and the pathophysiology of long-term structural and functional micro- and macrovascular complications in both human and experimental diabetes. Other interests include the pathology, imaging and treatment of especially adrenal, thyroid and pituitary tumours, and their effects on quality of life of patients. He also has a large outpatient clinic for rare (congenital) metabolic diseases.

Брюс Вольфенбуттел – профессор, Медицинский центр при Университете Гронингена, Нидерланды. Доктор Брюс Вольфенбуттел является профессором эндокринологии и метаболизма, а также заведующим кафедры эндокринологии Медицинского центра при Университете Гронингена.

Доктор Вольфенбуттел – основатель исследовательской группы LifeLines Cohort, которая на базе большой части населения, рассматривает взаимодействие ген-ген и ген-окружающая среда и развитие хронических многофакторных заболеваний, таких как диабет, сердечно-сосудистые заболевания и заболевания органов дыхания.



Профессор Вольфенбуттел получил свой диплом по медицине в Университете имени Эразма в Роттердаме, Нидерланды, и работал в течении 2 лет в качестве ученого в отделении по изучению сердечно-сосудистых заболеваний в Тораксцентре того же университета. После окончания учебы по изучению внутренних болезней в Роттердаме, работал в качестве ассистента профессора медицины и эндокринологии в университетском госпитале Маастрихтского университета, Нидерланды, с 1988 по 2002 годы.

Исследования профессора Вольфенбуттел сконцентрированы на изучении генетических и биохимических факторов и влияния ген-окружающая среда на развитие обоих типов диабета – 1 и 2, а также патофизиологии длительных структурных и функциональных микро и макро осложнений заболеваний сосудистой системы как у людей, так и на экспериментальном уровне. Также занимается изучением патологии и лечением опухолей надпочечников, щитовидной железы и гипофиза, а также их влияния на качество жизни пациентов. Ведет амбулаторное лечение редких (врожденных) метаболических заболеваний.

Brian Carey
Executive Administrator of EASD

Organiser of EASD Postgraduate Education, EASD Virtual Meeting (easdvirtualmeeting.org), Online Media and EASD Press Liaison Officer

Брайан Кэрри – исполнительный администратор Европейской Ассоциации по изучению диабета (EASD), организатор курсов последиplomного образования по клиническому диабету, видеоконференций.



Юрченко Ольга Леонидовна
Секретариат в России

Окончила МГИМО – МИД СССР, факультет международных экономических отношений. Длительное время работала в ВАО «Интурист». Генеральный директор компании «Глобал Экспресс». Общие вопросы по организации курсов EASD в России.

Mrs. Olga Yurchenko graduated from MGIMO MFA USSR, department of international economic relations. Worked at VAO Intourist for a long time. Now General director of Global Express LTD. General administration of EASD Course arrangements in Russia.



Бойко Александр Борисович
Секретариат в России

В 2004 году окончил Московскую государственную академию приборостроения и информатики (ФСПО МГАПИ), по специальности «Вычислительные машины, комплексы, системы и сети».

В 2009 году с отличием окончил Институт государственного управления, права и инновационных технологий, факультет «Прикладная информатика (в экономике)» Ведущий технический специалист компании «Глобал Экспресс».

Разработчик и администратор сайта DIABFOOT.ORG
Техническая и организационная поддержка курсов EASD в России.

Mr. Alexander Boiko graduated from the Moscow State Academy of Instrument Engineering and Informatics (FSPO MGAPI), specialty «Computers, complexes, systems and networks» in 2004. In 2009 graduated with honors from the Institute of Public Administration, of law and innovative technologies, the Faculty of Applied Information Science (in Economics).

Senior Technical Specialist of Global Express LTD.
Creator and administrator of DIABFOOT.ORG website.
Technical and organizational support of EASD Courses in Russia.



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**МЕСТО ПРОВЕДЕНИЯ V КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ
ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ
ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD)
САНКТ-ПЕТЕРБУРГ, РОССИЯ, 12-14 АПРЕЛЯ 2018 г.**

МЕСТО ПРОВЕДЕНИЯ:

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Адрес: Малая Морская ул., 24, Большая Морская ул., 39, Санкт-Петербург

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**VENUE OF THE V EASD POSTGRADUATE COURSE
ON CLINICAL DIABETES (EASD)
SAINT-PETERSBURG, RUSSIA
12-14 APRIL 2018**

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Astoria / Angleter Hotels
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Conference Hall «Ballroom», ground floor

WORKSHOPS:

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Anna Pavlova Hall, Angleter Hotel, ground floor
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**O1 PERMANENT NEONATAL DIABETES MELLITUS CAUSED
BY A MUTATION IN THE INSULIN GENE: CLINICAL CASE**

N.N. Bocharnikova, L.A. Shapkina

Regional Clinical Hospital № 2, Primorsky Regional Center of diabetes and endocrine diseases, Vladivostok, Russia

A case report present a boy of 4.5 years with a rare form of permanent neonatal diabetes mellitus (PNDM) caused by a mutation in the insulin gene.

At the age of 3 months patient had polyuria, increased appetite, intertrigo, weight loss, then dyspnea, multiple vomiting, sopor and dehydration was appeared. Diabetes mellitus was diagnosed in a state of severe ketoacidosis with a glycaemic level - 25.4 mmol / L and acetonuria - 10.0 mmol / L. ICA and GAD antibodies were not detected, the secretion of the C-peptide was retained. The level of HbA1c was 11.5%. The family history of diabetes was negative. In anamnesis vitae: prematurity 34 weeks without delay of intrauterine development; intrauterine cytomegalovirus and herpetic infections, intrauterine bilateral pneumonia. Thus, infection and genetic defects of β -cell function were considered as possible causes of glycemic disorders.

To clarify the diagnosis, the patient was checked to a molecular genetic test (Department of hereditary endocrinopathies, Endocrinology Research Center, Moscow). Direct sequencing method revealed a heterozygous mutation in the insulin gene (proinsulin) of r.C96Y. The obtained data allowed verifying the diagnosis of PNDM and finally recommending insulin therapy as a treatment.

Over the next 3 years of follow-up, patient received baseline bolus insulin therapy (Aspart, Detemir) 0.75-0.8 U / kg per day. In 2014 - HbA1c level was 8.7%; in 2015-9,2%. In July 2016 according to the continuous monitoring of glucose (iPro2 Medtronic), variability of glycemia was from 3.7 to 18.8 mmol / l, HbA1c - 8.2%. In November 2016 patient was transferred to pump insulin therapy (pump Akkuchek Kombo, insulin - Aspart). The daily pump dose of insulin varied within 0,6-0,7 units / kg; in 2017 the level of HbA1c - 7.8%. During the entire period of observation, severe hypoglycemia was not observed, twice – ketosis was revealed against the background of intercurrent diseases. The patient has normal indicators of growth, weight and neuropsychological development.

This case is interesting because of the presented pathology rarity, and also demonstrates the importance of molecular diagnostics for expected course of disease and appointment of reasonable therapy.

O2 CASE OF MILD PROGRESSION OF ACCIDENTALLY REVEALED T1D

N. Moghaeva¹, V. Platonov²

¹ Republican pediatric clinical hospital, Syktyvkar, Komi Republic, Russia

² Pediatric city hospital №19, Saint-Petersburg, Russia

Alice is the single daughter of a caucasian couple, born at the end of normal pregnancy by natural delivery with a birth weight adequate to gestational age. She had no complaints on any conditions. At the age of 10 years (weight – 38 kg, height – 149 cm) she was diagnosed with type 1 diabetes (T1D) by the incident hyperglycemia, revealed during the routine visit to pediatrician. The diagnosis was confirmed by OGTT with 66.5g of glucose. Results of glycemia levels during the test were: FGP - 4,9 mmol/l, after 120 minutes – 13,1mmol/l. There were no polyuria, polydipsia or weight lose. Daily glycemc ranges were 3,6-7,8mmol/l (confirmed by CGM). High levels of IA-2 (24,87) and HbA1c (6,62%) were revealed. Insulin level was normal (6,2) and C-peptide level was reduced (0,78). IAA and ICA were negative. There were no data on postprandial hyperglycemia, and insulin therapy was not prescribed. Therapy was focused on diet and proper physical activity.

During the next three years of observation (FGP 3,75 - 5,29 mmol/l; HbA1c 5,45 - 5,9%; ICA-2 24,87 - 66,57; insulin 2,0 - 9,05; C-peptide 0,68 - 1,38. Daily glycemia was 3,8 - 8,6 mmol/l (confirmed by numerous of CGM)).

She had a menarche at 13 years. Since that time postprandial hyperglycemia up to 14,1mmol/l occurred and MDI were prescribed (Detemir 3 IU in the morning and 1 IU before the bedtime and Aspart 0,5 IU/10g before the meals). In 10 days a several allergic reactions on Aspart were occurred, and it was changed for Lispro.

For now Alice is 13years old (weight – 44 kg, height – 158 cm), she in on MDI (Detemir 2,5+2,5 IU (0,1 IU/kg) + Lispro (1 IU/10g before breakfast and 0,4 IU/10g before lunch and dinner).

This case illustrates the mild progression of accidentally revealed T1D, which performed in classical way after the beginning of puberty.

**O3 A CASE OF EARLY MANIFESTATION AND QUICKLY PROGRESSION
SENSORIMOTOR PAINFUL AND AUTONOMIC NEUROPATHY IN PATIENT
WITH TYPE 1 DIABETES**

S.K. Valieva¹, I.V. Gurieva^{1,2}, O.V. Svetlova¹

¹ Federal Bureau of Medical and Social Expertise

² Russian Medical Academy of Continuous Professional Education
Moscow, Russia

Patient S., 20 years old.

Diabetes mellitus type 1 was detected in 2013, at the age of 15. He had a 4-month history of polyuria and polydipsia, accompanied by a 20-kg weight loss. The patient has been observed in the clinic since 2016, when in a state of unstable control of glycemia and twice-transmitted ketoacidosis, vitamin D deficiency (9.6 ng/ml from April 2016) and severe pain appeared in legs. Pain characterized as typical neuropathic and was accompanied by hyperalgesia and allodynia. EMG revealed violation of conduction velocity of sural and peroneal nerve. Cardiovascular autonomic testing revealed marked violation of parasympathetic innervation and a moderate defeat of sympathetic autonomic nervous system (CAN-7/max 10 by Ewing battery). Treatment with gabapentin (titrated from 900 mg to 1800 mg per day), antioxidants (alpha-lipoic acid 600 mg IV and then 600 mg/day PO, vitamin D 5000 U/day, physiotherapy with a positive effect initiated and pain regressed in three months. During the year, patient felt satisfactory.

Level of glycemic control remained unsatisfactory (glycated hemoglobin from 09.10.17 - 13.6%). Diarrhea manifested. The patient noted again the emergence and intensification of pain since September 2017 (he stopped vitamin D and gabapentin supplementation). He looks for help when he started feeling pain and hyperalgesia (especially worrisome when using shoes and walking). Gabapentin was again prescribed in combination with pathogenetic therapy (B-group vitamins and minerals IM, alpha-lipoic acid IV, actovegin 400 mg IV No. 10). Further, duloxetine was added at dosage of 60 mg per day.

Insulin pump therapy was initiated in November 2017 and high doses of vit. D (15 000 / day) prescribed. Trimebutin for improving of GI motor disturbance prescribed. Patient stabilized, pain scores decreased (McGill Quest. 51-23). Depression improved (HARDS 15-9). Vitamin D level normalized (41 ng/ml from March 2018). BMI – 19.7. Diarrhea with mild symptoms still persists (COMPASS-31 Questionnaire). CAN slightly improved (6/max 10). Local neurological status: Temperature perception in low limbs violated till mid calf, moderate hyperalgesia and allodynia persist, VPT of big toe – 10-13 Volt (Biothesiometer), absence of Axilla reflexes, weakness of foot muscle dorsiflexion. Severe skin microcirculation abnormality including skin galvanic response violation and the frequency-specific microcirculatory blood-flow (MBF) of the skin abnormalities (Multiscan BC- OXi) suggested severe skin and probably nerves endings hypoxia. Significant cardiovascular autonomic failures (LF/HF, SDNN and RMSSD were decreased) confirmed CAN.

Conclusion: This clinical case demonstrates early manifestation of painful diabetic sensory - motor neuropathy and severe autonomic disorders in type 1 DM patient with unsatisfactory control of glycemia. Combination therapy with symptomatic and pathogenetic drugs, pump insulin therapy, treatment with vitamin D and alpha-lipoic acid required to be prescribed. Genetic predisposition and unsatisfactory control of glycemia are probably prerequisites. Differential diagnosis with acute sensory pain and treatment induced neuropathy (TIND) is required.

04 PUMP THERAPY INITIATION IN ELDERLY PATIENT WITH T1D**K. Solovyova**

Almazov's National Medical Research Center, Saint-Petersburg, Russia

A 68-year-old woman with long T1D duration entered the hospital for pump therapy initiation. Before the hospitalization she used her daughter's insulin pump in basal regimen only, using insulin pens for injecting boluses. This mode of insulin infusion was used for about 2 years.

Her family history does not allow to exclude genetic forms of diabetes, because her mother, daughter and grandson have diabetes. Unfortunately, genetic examination was not available in the center during her hospitalization, so this case was considered as type 1 diabetes mellitus.

Her glycemic control seemed to be in target range because of HbA1c level of 7,3%, but in fact she had a lot of hypoglycemic episodes. During the last year before the hospitalization she had hypoglycemia unawareness and, as a result, more than 2 episodes of severe hypoglycemia with seizures and loss of consciousness a month and non-severe episodes more than 3-4 times a week.

As for other diabetes complications she had OU non-proliferative diabetic retinopathy, sensory form of diabetic neuropathy of lower and upper limbs and diabetic nephropathy (CKD C1A1). As for cardiovascular disease she had hypertension with high levels of blood pressure, 3 episodes of acute cerebrovascular insufficiency in 2010,2011,2012 and ischemic heart disease without myocardial infarction in the form of 2 functional class of stenocardia.

During the previous basal rate evaluation was noted that the average basal rate during the day was about 1,7-2 U/h (total daily basal dose over 40-48 U/day with the patient's weight of 86 kg). Besides she didn't count carbohydrates and didn't use carb and sensitivity factors injecting bolus insulin by the mode «10-7-10». She didn't know about pump functions like temporal basal rate and modified boluses.

In the endocrinology department insulin pump therapy was initiated using Accu-Check Spirit Combo system. New basal rates were calculated as well as carb and sensitivity factors during the day. The average basal dose became 0,76 U/h (18-20 U/day) and there were no severe hypoglycemic episodes during the hospitalization, episodes of registered non-severe hypoglycemia were reduced. It was strongly recommended to use CGMS to prevent hypoglycemic episodes. The patient was educated to use temporal basal rates and successfully used modified boluses with good glycemic effect. Besides she tried to count carbs using bread unit system.

The screening of diabetes complications progression was evaluated. She was examined by the ophthalmologist – no signs of retinopathy progression were found. She had previous history of diabetic nephropathy, during the hospitalization microalbuminuria level was 9,77 mg/day, creatinine level was 50 mkmol/l, GFR - 96 ml/min/1,73 m², so she had CKD C1A1. As for neuropathy, she was examined by neurologist and clinical signs of sensitivity disorders on lower and upper limbs were found (reduced temperature and vibrational sensitivity both on hands and legs, loss of tactile sense on her feet). It was recommended to evaluate ENMG to confirm these disorders on upper limbs. There were no signs of nonstable stenocardia during the last 6 months before the hospitalization, during the ECG monitoring no blind ischemic episodes were found. Her hypotensive therapy was corrected, so in the end of hospitalization blood pressure level was in the target range.

Conclusions:

- Age is not a barrier for all types of therapy, including pump therapy;
- New technologies can not be used without appropriate education.

O5 CASE OF WOLFRAM SYNDROME (DIDMOAD SYNDROME)

Y. Kolchanova, A. Karaeva

Almazov National Medical Research Centre, Saint-Petersburg, Russia

A 25-year-old patient with type 1 diabetes, diagnosed at the age of 8 and receiving a basal-bolus insulin therapy, was hospitalized for initiation of the insulin pump therapy. At the time of hospitalization, the level of glycated haemoglobin was 7.5%. During the hospitalization, the patient learned to use the pump, and the basal insulin delivery rate, insulin-to-carbohydrate ratio and insulin sensitivity factor were calculated. The target blood glucose levels were achieved without episodes of hypoglycemia.

Diabetic nephropathy in the stage of microalbuminuria, as well as diabetic sensory polyneuropathy of the lower limbs, were revealed as complications of diabetes mellitus.

The concomitant pathology revealed a long history of diabetes insipidus, diagnosed at the age of 7. During hospitalization aimed at confirming the diagnosis, the presence of diabetes insipidus was confirmed by conducting the dry diet test. During therapy with 0.2 mg Minirin twice daily, diabetes insipidus has been compensated.

In addition to that, partial optic nerve atrophy was revealed about 5 years ago, followed by the regular courses of electromagnetic stimulation at outpatient units. A contrast-enhanced MRI of the pituitary gland was performed to exclude the presence of a pituitary gland neoplasm, but the results had not revealed any convincing data.

The patient's history, clinical presentation, a combination of type 1 diabetes and diabetes insipidus, and partial optic nerve atrophy, suggested the Wolfram syndrome. To exclude the fourth component of DIDMOAD syndrome, the patient had an examination by the otorhinolaryngologist who diagnosed bilateral hearing loss in the high-frequency range (>8 kHz), bilateral 1st-degree sensorineural hearing loss, and gave recommendations for further monitoring and treatment. Kidneys ultrasound was performed to exclude hydronephrosis and bladder atony. It revealed calico-pyelectasis of both kidneys and diffuse changes in the renal parenchyma, for which the patient also received recommendations.

In this way type 1 diabetes with diabetes insipidus needs further examination for identifying Wolfram syndrome to provide early diagnostics of the combined pathology and defining further recommendations for its monitoring.

**O6 THE ROLE OF PSYCHOLOGICAL FEATURES
IN TYPE 1 DIABETES MANAGEMENT**

M.N. Dunicheva, T.U. Zagorovskaya, E.M. Patrakeeva

A 45-year-old Caucasian man without familial diabetes mellitus history was diagnosed type 1 diabetes at the age of 27 years. Classic symptoms of diabetes appeared after significant stress. At the admission to the hospital the blood glucose value was 14 mmol/l, he complained of severe weakness, excessive thirst, weight loss (almost 15 kilos per month) and dry mouth. The patient was put on basal-bolus therapy. The first doctor who diagnosed the disease said that high blood glucose will result to chronic complications and the most important goal is to avoid high values.

Next 11 years of the disease patient tried to achieve constant glucose values less than 5 mmol/l. It resulted to very frequent hypoglycemias, including severe hypoglycemias - sometimes more than 5-6 per week (more than 15 per month).

Last 6 years patient tries to achieve glucose values less than 6 mmol/l, the duration of levels higher than 7 mmol/l are no longer than 3 minutes per year. Patient uses only insulin syringes. He measures blood glucose more than 40 times per day using usual test-strips and visual test-strips BetaCheck. During all time of the disease his HbA1c level was no higher than 5,2% (once), the last HbA1c is 2,9%. He does not have any diabetes long-term complications.

Studies have shown that effective diabetes management can delay or prevent the micro- and macrovascular complications of diabetes. But sometimes way of achieving optimal glycemic control can affect quality of patient's life resulting to different fears and other psychological problems.

**O7 MATURITY-ONSET DIABETES OF THE YOUNG TYPE 5 (MODY5):
A CASE REPORT**

D.M. Bulumbaeva¹, V.V. Klimontov¹, A.K. Ovsyannikova²

¹ Laboratory of Endocrinology, Research Institute of Clinical and Experimental Lymphology

² Branch of the Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Sciences, Research Institute of Therapy and Preventive Medicine – Branch of the Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Sciences

Novosibirsk, Russian Federation

Hyperglycemia in a 27-year-old non-obese woman was detected in the first trimester of the third pregnancy in November 2015 (plasma glucose 5.8 mmol/L at fasting), a diagnosis of gestational diabetes was established, and insulin therapy was administered in a basal-bolus regimen (detemir and aspart, total dose 12 U/day). After delivery for two months, blood glucose levels returned to normal. Then, hyperglycemia up to 10-15 mmol/l had returned. The therapy with metformin and glimepiride was non-effective, and insulin detemir was restarted (8 U/day), in combination with sitagliptin and empagliflozin. In October 2016, pancreatic islet and glutamate decarboxylase antibodies were negative, C-peptide level was 553 pmol/l (298-2350 pmol/l) at fasting, 1129 pmol/l after the meal. In October 2017 mutation in the hepatocyte nuclear factor-1beta gene (HNF1B) was revealed (rs138986885), MODY5 was diagnosed.

By this time, blood glucose levels elevated up to 15-16 mmol/L, C-peptide decreased to 83 pmol/l. After metformin and empagliflozin have been withdrawn and basal-bolus insulin therapy with glargine 300 U/ml 24 U/day and glulisine 22 U/day was initiated, glycemic targets were achieved. No other HNF1B-associated clinical phenotypes, including genital malformations or kidney involvement, were revealed. There are no other known cases of diabetes in relatives. Nevertheless, currently other family members are screened for MODY-associated mutations. The present case demonstrates the clinical course of diabetes in MODY5 patient.

O8 CASE OF DIABULIMIA IN A 21-YEAR-OLD WOMAN

V. Labashova, MD

Republic Centre of Medical Rehabilitation and Balneotherapy, Minsk, Belarus

Diabulimia is a condition when patients with diabetes mellitus deliberately and regularly give themselves less treatment than they need, for the purpose of weight loss. The early stages of diabulimia is difficult to define. The diabetes specific signs are recurrent episodes of hyperglycemia or hypoglycemia, frequent hospitalizations for poor blood sugar control, early onset of complications. Diabulimia is incredibly dangerous. Researches showed that patients have a wide range of complications including retinopathy, neuropathy and nephropathy, appear more quickly severe DKA and have a higher mortality rate.

Case: Patient was 21-year old woman. When she was diagnosed as having type 1 DM at the age of 12 years, her body weight reduced from 60 to 50 kg, but started to regain weight after insulin treatment. She visited her endocrinologist regularly and demonstrated a good knowledge of the disease, but her glycemia was predominantly high, her HbA1C value was 12.2 mmol/mol.

The diagnosis of diabulimia was made at the hospital (she was hospitalized at the emergency department with severe DKA). The physical examination findings were as follows: body weight: 45 kg, height: 164 cm, BMI was 16,79 kg/m². Laboratory findings revealed iron deficiency anemia, hyperglycemia over 320 mg/dL, a bicarbonate level 12 mEq/L, pH 7.1, ketonemia and ketonuria. Follow-up and treatment of the patient was planned by the cooperation endocrinologist and psychiatrist.

In conclusion, this case suggests that diabulimia should be kept in mind by endocrinologists, especially in young woman seeking for losing weight.

O9 CLINICAL CASE OF USING MOBILE APPLICATION IN TREATMENT OF PATIENT WITH TYPE 1 DIABETES MELLITUS IN REMOTE REGION OF THE ARCTIC ZONE OF THE RUSSIAN FEDERATION

R. Arteeva, A. Zapalova, L. Zubov

The Central District Polyclinic of the Zapolyarny District, The Okrug Nenets Hospital (The Nenets Autonomous Okrug, Russia)

Introduction: Nenets Autonomous Okrug (NAO) is the most sparsely populated region of the Russian Federation with a population density of 0.25 people/km². Diabetes mellitus (DM) was diagnosed in 3.0% of the population. The actual problem is the providing of specialized medical care for people with diabetes living in remote villages of the NAO.

Methods: We evaluated usability, efficiency in control of DM and the possibility of remote communication «doctor-patient» using the electronic application «Diabetes Diary» by patient with DM. Patient M., 27 y.o. with DM type 1, which was manifested in June 2017 year. This young man was not committed to keep a paper diary of self-control, rarely entered data, forgot to measure glucose. He was studied to use mobile applications in treatment. He kept diary of self-control in a smartphone: entered the amount of carbohydrate, the quantity of the made insulin, blood glucose levels, duration of physical activity, the weight.

Results: Patient noted the ease of use of applications in everyday life, recording the results of self-monitoring of blood glucose, less likely to forget to fill in the diary. It became easier to identify trends of glycaemia, to analyze the causes of hypo- and hyperglycemia and patient can do self-correction of glycaemia.

The transfer of the diary data by the patient to physician via the password-protected Internet connection, most relevant to the use of the residents of remote settlements of the NAO. Patient can do it both on doctors visit and being far, for example, in other city. The transmitted information is displayed in graphs, which you can use to assess the dynamics of glycaemia, insulin dose, etc. Is is very representational for doctor and patient also. Using the app by our patient even for several weeks contributed to the improvement of diabetes control.

Conclusions: The use of the mobile application «Diabetes Diary» is a convenient and visual alternative to paper self-monitoring diaries that meet the needs of a modern patient with type 1 diabetes. It can allow reducing time on admission to the collection indicators and using it for the purpose of training and correction of therapy; improving doctor-patient interaction. Analysis of the obtained glycemic schedules together with the patient allows to increase motivation to self-control, as well as to identify glycemic trends and understand their cause, which will allow the patient to do self-correction of glycaemia. Remote technologies allow us to assess glycaemia under conditions of remote access without direct contact with the doctor. This ensuring the availability of specialized medical care for people with diabetes living in remote villages of our region.

**O10 SARCOPENIA AS ONE OF A RISK FACTOR FOR
FALLS AND FRACTURE IN PATIENT WITH DIABETES MELLITUS TYPE 2
(CLINICAL CASE)**

Y.S. Onuchina^{1,2}, ***I.V. Gurieva***¹

¹ Federal Bureau of Medical and Social Expertise

² Pirogov Russian National Medical University, The Russian Clinical Research Center for Gerontology,
Moscow, Russia

Introduction: Falls and fractures are common in older diabetic patients due to a number of factors: autonomic dysfunction, gait disorder, peripheral neuropathy, visual impairment, and episodes of hypoglycemia. Important contributing factors to increase fall and fracture risk in T2DM is sarcopenia - the age-related decline in skeletal muscle mass, quality and function.

Clinical case: Patient A. is a retired 79-year-old women with a 8-year history of T2DM. She reported decrease of walking speed, general weakness, and difficulties in standing up from chair, quick fatigue during walking, frequent falls (8 times over the past year), weight loss (6 kg) for 2 years. Menopause was at age 50 and she hadn't been using menopausal hormone therapy. In 2017 she had 2 low-trauma fractures: of the right radial bone and bones of the right ankle. FRAX scale: the ten-year probability of major osteoporotic and hip fractures will be 33% and 21%. Other medical problems include hypertension for several years. Cardiac arrhythmias, serious eyes disease and neurological disease were excluded, except peripheral neuropathy. She takes only gliclazide 30 mg and losartane 100 mg per day. Patient didn't notice any episodes of hypoglycemia.

BMI was 17,7 kg/m²; ankle and shoulder circumferences (30 and 20 cm) were below normal. Laboratory studies revealed hemoglobin 125 g/L, HbA1c 7,9%; 25(OH)D3 19 nmol/L, GFR (CKD-EPI) 58 mL/min/1,73m². X-ray examinations did not demonstrate changes in hip and knee joints. Ultrasound examination of peripheral arteries of lower extremities, carotid and brachiocephalic arteries were't demonstrated any pathology. Orthostatic test was negative. Peripheral neuropathy was evaluated with calculation NDSm and NIS-LL scales and results of scales were 4 and 14 points. Sarcopenia was diagnosed by decrease of skeletal muscle mass index and/or muscle strength and/or muscle function (European Working Group on Sarcopenia in Older People, EWGSOP; 2009). Muscle strength was measured with carpal dynamometry. Muscle function was evaluated with short physical performance battery (SPPB) tests. The SPPB tests includes standing balance, gait speed, timed chair stands test. Skeletal muscle mass index (SMMI) was evaluated with bioimpedance testing. Appendicular skeletal muscle index (ASMI) was evaluated with dual energy X-ray absorptiometry (DXA). Patient A., demonstrated decreased indices of dynamometry (right and left arms: 9 and 11 kg), number of points SPPB tests (8 points) and walking speed (0,758 m/sec). Both SMMI and the ASMI were below normal limits (5,23 and 5,08 kg/m²). According to the EWGSOP criteria of sarcopenia, patient A., demonstrated reduction of muscle mass, strength and function and sarcopenia was diagnosed.

This patient demonstrated risk factors combination for falls and fractures, in particular combination of diabetic neuropathy and sarcopenia result greater risk of falls and fractures.

Conclusions: Timely identification and management of sarcopenia in elderly patients with T2DM will help improve their functional capacities and, probably, reduce the number of falls and, as a result, fracture risk.

**O11 DIABETES MELLITUS TYPE 2, COMPLICATED
BY DIABETIC FOOT SYNDROME****D. Podchinenova**

Siberian State Medical University. Department Endocrinology and diabetology department

Rationale: Diabetic foot syndrome is a serious complication of diabetes mellitus, which often leads to disability of the patient, and sometimes-even death. Regular check-ups and compliance foot care can significantly reduce the risk of this complication.

Data of anamnesis, examination: 60-year-old man entered the endocrinology clinic, with multiple complaints, mainly on pain and burning in a single left foot, blurred vision.

He suffers from diabetes for about 13 years, a manifestation of type 2. From the onset of the disease received oral antihyperglycemic medication until 2010, when due to the general severity of the condition was transition to a basic-bolus insulin therapy. Compliance is low. This situation was due to the development of moist gangrene on the background of the infected wound of the right foot. Operative treatment- midleg amputation was applied. In 2013, diabetic osteoarthropathy of the only left foot was diagnosed; recommendations for immobilizing the foot were not observed, wearing complex orthopedic footwear. At the time of hospitalization, diabetes is subcompensated (glycohemoglobin-9.6%)

Objectively: man is obese. Status localis: the right foot after is midleg amputation, the skin above the stump is atrophied, thin, bright pink. Left foot: the skin is dry, with small desquamation, the vaults are flattened, deformed like «rocker bottom foot» beak-shaped fingers.

Conclusions: the absence of measures aimed at the prevention of diabetic foot syndrome and the rejection of treatment recommendations leads to loss of limb and resistant disability of patients with diabetes.

O12 EFFECT OF ONE WEEK OF CPAP TREATMENT ON GLUCOSE LEVELS IN PATIENT WITH TYPE 2 DIABETES MELLITUS AND OBSTRUCTIVE SLEEP APNEA (CLINICAL CASE)

M.I. Fadeeva

National Medical Research Center of Endocrinology, Moscow, Russia

Objective: to assess the effect of continuous positive airway pressure (CPAP) on compensation of type 2 diabetes mellitus (DM2) in patient with obstructive sleep apnea syndrome (OSAS).

Introduction: OSAS is common in patients with DM2 and is associated with increased risk of cardiovascular diseases and death. OSAS and intermittent hypoxia has a negative effect on glucose metabolism (GM) regardless of obesity. CPAP can improve the glucose levels in patient with DM2 and OSAS.

Clinical case: A patient L., 54 years old, with decompensation of DM2 on oral hypoglycemic therapy and obesity (body weight 132 kg, body mass index 37.7 kg/m²) was under observation for 3 months. In according to algorithms of medical care for diabetic, patient underwent correction of hypoglycemic therapy, but target blood glucose levels were not achieved (glycated hemoglobin is 8.7%, the glucose levels are 9–14 mmol/l). C-peptide is 5.1 ng/ml (1.1–4.4). Taking into account strong snoring and breathing stops in sleep from the words of others, results of special questionnaires, the patient is suspected of OSAS with daytime sleepiness and low quality of sleep. Based on the data of night respiratory monitoring (ApneaLink, ResMed), the patient was diagnosed with severe OSAS, mild night hypoxemia: apnoea-hypopnoea index 34 events/h, blood saturation is average 90% and minimum 77%. The patient was selected autoCPAP – an acceptable method of OSAS treatment according to recommendations of the American Academy of Sleep Medicine. One week of effective treatment of OSAS by autoCPAP resulted in normalization of blood glucose levels with the invariable regimen of hypoglycemic therapy.

Conclusions: This clinical case demonstrates the positive effect of the night breathing normalization by CPAP on glucose levels in OSAS and DM2 with insufficient glucose control on hypoglycemic therapy.

**O13 THE CHEREPOVETS' DIABETOLOGICAL CENTER
INSULIN INJECTION TECHNIQUE STUDY****V. Kalugina**

Cherepovets city hospital №2, Diabetological center

Background: It is known that the correct insulin injection technique is crucial to reducing glucose variability and obtaining good glycemic control in patients.

The aim of the research was to assess the adequacy of patient's insulin injection technique according to international standards.

Methods: From April through October 2017 insulin-injected patients, who applied to Cherepovets Diabetes center for the first time took part in a questionnaire survey.

Results: There were 221 people interviewed, of whom 177 were with T2DM (77.0% -women, aged 64,89±9,69), 44 with T1DM (64.0% - women, average age was 40,04±14,37).

Mean HBA1c was 7.82±1,61% for T2DM group, 7.57±1,15% for T1DM group.

There was a striking tendency to use the inappropriate area right around the umbilicus in both groups (87% of participants in T2DM, 55.0% in T1DM).

The use of 8 mm pen needles was 68.0% of the patients surveyed in T2DM group and 61.0% in the T1DM group. In contrast, the 4 mm pen needles were used by only 8.5% of the people interviewed in T2DM group and by 16.0% in T1DM group.

The needle replacement after each injection was quite infrequent in both groups: 10% for T2DM and 9% for T1DM.

The occurrence of lipohypertrophies was 18,6% in T2DM group and 39% in T1DM group.

No patients in T1DM group and only 2,8 % of participants in T2DM group have used insulin injection technique in an absolutely correct way.

Conclusions: There is a real need for a better education of insulin-injected patients.

**O14 DIAGNOSTIC PROBLEMS IN CONFIRMATION
AND VERIFICATION OF DIABETES TYPE**

M. Orlova, A. Frolova

Saratov State Medical University named V.I. Razumovsky

Tatiana is 40 years old, and she was disturbed by dry mouth and thirst, appearing under the stress for 5 years. She works as a personal secretary in a large company and she a huge work load and job stress. Patient grew up in a foster family so we do not have any data about heredity. There was no any polyuria, polydipsia or weight excess. In last 5 years she was consulted by an endocrinologist. In 2013 FGP - 5.3 mmol/l, HbA1c- 5.6%; in 2017 according to OGTT: FGP - 5.1 mmol/l, after 120 minutes - 8.1 mmol/l, HbA1c- 5.7%, IAA and ICA were negative and diabetes was not confirmed.

However, she continued to present diabetic complaints and indicated a regular increase in postprandial glycemia till 12-15 mmol/l by glucometer. The insulin level was normal (9.6), the C-peptide level was also within the normal range (1.1). CGM was carried out for 7 days. Glycemia was within the target (normal) values for 5 days of observation. 2 days under stress we detected an increasing of blood glucose I in range evel to 13.9 mmol/l. There was no possibility of carrying out a genetic test.

Diabetes was diagnosed and was given an advices on diet and physical exercises. At further observation during the year: FGP 4.75-5.49 mmol/l, HbA1c 5.65-5.92%, insulin 3.0-8.5, C-peptide 0.78 - 1.0, daily glycemia was in range 5.1-9.6 mmol/l (confirmed by CGM).

This case illustrates late diagnostic and difficulties in type of diabetes verification. It is necessary to carry out a genetic test for confirmation of MODY-diabetes and choosing rational pharmacotherapy.

O15 MATURITY-ONSET DIABETES OF THE YOUNG

O. Koshlakova¹, G. Korobitsina¹, E. Sibileva², E. Sloboda³

¹ Arkhangelsk Regional Children's Clinical Hospital

² North State Medical University

³ Arkhangelsk City Clinical Hospital

MODY is the first area of diabetes where the molecular genetic takes the important clinical and scientific role. The most frequent subtypes of MODY in Russia are MODY2 and MODY3. The diagnostic by gens sequestration method is a very expensive. Therefore, the patient's selection for molecular genetic research is the very difficult and important doctor's work.

Subtype of MODY2, β -cell dysfunction is a violation of the glucose sensor – glucokinase, catalyst the conversion of glucose to G6-f in β -cells and hepatocytes. The rate of insulin secretion is reduced, the glucose metabolism and the process of glycogen accumulation in the liver is violated. At physiological concentrations of insulin the suppression of glucose production by the liver is impaired. So fasting hyperglycemia is aggravated. The rate of neogluconeogenesis is increased. The debut of hyperglycemia is early childhood, from birth. The severity of hyperglycemia is moderate, 5,5-8,0, little changing with age. Glycosylated hemoglobin within normal limits, or slightly higher. Less than 2 % children need insulin. Without «honeymoon period» in diabetes the need by insulin less than 0,5 ED/kg without trend to ketosis. The microvascular complications are rare.

Features of anamnesis of life: low birth weight!

The case description. Teenager F., 17 years old.

Reason for the study: impaired glucose tolerance. The important characteristic of anamnesis of life: low weight at birth, 2400 gramm. In the study of coding regions of genes it was detect existens of functionally significant nucleotide substitution c.683C >T in the gene GCK in the heterozygous state. It is the molecular-genetic marker associated with MODY type 2 (OMIM 125851).

Subtype of MODY3, β -cell dysfunction is associated with the gene of the transcriptional hepatic factor HNF1 α , which regulates the transcription of the insulin gene. The age of debut of progressive hyperglycemia is teenagers or young adults.

Non-diabetic symptoms: low renal threshold for glucose.

The case description. Teenager T, 16 years old.

Reason for the study: unspecified diabetes mellitus. The important characteristic according to the history of the disease is low need for insulin. By the sequencing of coding gene regions was revealed the presence of probably pathogenic variant of amino acid replacement p.Leu162Arg in the gene HNF1A in the heterozygous state. It is the molecular-genetic marker associated with MODY 3 типа (OMIM: 600496).

The study of coding regions of genes in both cases was carried out by the method of new generation sequencing (NGN) on the apparatus «Hi Seq 2500» («Illumina», USA) in the laboratory of prenatal diagnosis of hereditary and congenital human diseases in St. Petersburg. Head of laboratory, Corr. Member of RAS, Honored worker of science of the Russian Federation, Honored worker of science of the Russian Federation, Professor, doctor of medicine Baranov V. S.

The researches were carried out with the support of the Fund for development and support of philanthropy «CAF» program for children with endocrine diseases.

There is no conflict of interest.

**O16 CASE OF PSYCHOTHERAPEUTIC HELP
IN TEENAGER'S T1D CONTROLE****T. Zagorovskaia**

Saint-Petersburg State University, Saint-Petersburg, Russia

Patient: a boy, 14 y.o. T1D since 5 y.o. HbA1C = 11% for the first visit time. Multiple injections.

Reasons for the psychotherapist visit:

1. Doesn't want to measure blood glucose level and to take insulin injections
2. Eats everything any time, especially sweets, lemonade, high carbohydrate level products without blood glucose measurement and insulin injections
3. Apathy, not willing to talk about T1D and to visit the endocrinologist

As common with such cases, it is the patient's mother who came to the psychotherapist. We have the structure of psychological work in such cases related to children and teenagers.

1. Interview with parents (the teenagers usually don't need and don't want to come), discussion of the symptoms and the case
2. Parents attend the Parents' support group

While children live with their parents they are very tentative to the parents' attitudes and words about T1D. Parents are often tired, angry with T1D or feel guilty. Besides, they often don't have communicative skills and knowledge about children's psychological peculiarities to build close relationships and dialogue with them.

The Parents' support group consists of 8 weekly 2-hours meetings. The work is organized with parents only. Changing their attitude to the T1D and improving their communicative skills we change the children's perception of T1D and diabetes control.

Themes to work on:

1. Parents' feelings: anger, guilt, anxiety
2. Children's feelings: anger, guilt, anxiety, exhaustion, apathy, fear, offence.
3. Education about age peculiarities of the children and their connection to T1D management ability
4. Communicative skills: how to talk about T1D, everyday routine
5. Maintaining the contact with children and growing the parents' ability to support their children

After 8 meetings (2 months) the patient agreed to visit the endocrinologist and to use insulin pump. In 3 months from the first visit HbA1C became 9.2%. In next 3 months HbA1C became 7.3%. The mother notices that the relations between her and her son became warmer and closer.

O17 CASE OF UNPLANNED T1D PREGNANCY**E. Shilova**

Almazov's National Medical Research Center

A 31 year old women with type 1 entered the hospital in her 32th week of gestation. This pregnancy wasn't planned and HbA1c wasn't known in the early term of the pregnancy. Her glycemic control wasn't optimal with HbA1c 8,6% and blood glucose range between 3,0 – 18,0 mmol/ml. She doesn't have any chronic diabetes complications except sensory form of diabetic neuropathy of lower limbs. However such diabetic pregnancy complication as ultrasound features of macrosomia was already found.

The patient didn't count carbohydrates and didn't use carb and sensitivity factors, moreover she injected bolus insulin right after her meal. The high level of blood glucose was the most important problem there as we could see using CGMS.

In the hospital the patient was educated to count carbs using bread unit system, her insulin injection technique also was improved. We spent some time trying different intervals before her meal to make lower peak of blood glucose after breakfast and lunch. Finally 25 minute pause between bolus injection and her meal was perfect as it's often seemed in third term of diabetic pregnancy. As we expected her carb and sensitivity factors was rather high and our patient managed to use them effectively. She's had her blood glucose in the target range mostly by the C-section in her 37th week of gestation. She had a boy who weighed 4340 g, had a hypoglycemic episode just after his birth and spent two days in intensive care unit.

Conclusion:

- Prepregnancy consulting, proper education and optimal glycemic control could prevent most of diabetic pregnancy complications.
- Pregnancy could be a good motivation to get the target range of blood glucose.

O18 CLINICAL CASE REPORT «A FELON AND DIABETES»

O. Baranova

City outpatient clinic №27, Saint-Petersburg

Patient: male, 31 years old.

The beginning of November - right hand index finger felon. In 1-2 weeks the patient felt weakness, had increased sweating, decreased appetite, cramps and pulling pains in the legs muscles, thirst, frequent urination. In next 1-2 weeks had pain in thoracic part of the backbone.

X-ray revealed degenerative-dystrophic changes in the backbone. X-ray picture was not provide.

The conclusion of a neurologist: degenerative spine disease, treatment with NSAIDs, muscle relaxants.

Patient's mother has type 2 diabetes mellitus.

Self-monitoring of blood glucose: 14-20 mmol/l.

First visit to endocrinologist in January 2014.

Examination: skin moisture increased, body temperature was 37.20 C. No symptoms of DKA, no peripheral edema, ulcers. BMI 27 kg / m²

Blood test: Glucose 8.16 mmol/l; Total bilirubin - 57.9 µmol/l; ALT 47.6, AST 57.8 U/l, lactate - 12.81 mmol/l.; Creatinine 68 µmol/l; C-peptide - 15.01 ng/ml; Insulin -140 µIU/ml; HbA1c 5.6%

Urine test: leukocyturia, microhematuria, ketones negative.

The patient was urgently sent to the city hospital because of hyperglycemia, lactic acidosis.

The hospitalization was denied because of the moderately elevated blood glucose level of 10.1 mmol / l.

The patient kepted a diet, BGL normalized. But the patient's condition continued to deteriorate.

Only in February 2014 he was hospitalized in the city hospital endocrinology department. At that moment the patient could not walk because of severe pain in his back and legs.

Hospital examination diagnosed: sepsis, septicopyemia, osteomyelitis of thoracic vertebrae bodies Th10-11.

The patient was moved to a surgery hospital, where he was operated.

**O19 THE INFLUENCE OF TESTOSTERONE REPLACEMENT THERAPY
ON METABOLIC STATUS IN MEN WITH TYPE 2 DIABETES MELLITUS**

E. Dzantjeva, E. Streltsova, I. Khripun, S. Vorobyev
Rostov State Medical University

Numerous studies have shown a high prevalence of hypogonadism in men with type 2 diabetes mellitus (T2DM). The prescription of testosterone replacement therapy in the complex treatment of patients with T2DM is being actively studied.

Case report: A 56-year-old man complained of thirst, leg pain, mood disturbance, erectile dysfunction. T2DM was detected 3 years ago. The patient is treated with Metformin 2000 mg/day, Vildagliptin 100 mg/day, insulin Lantus 10 U/day.

On physical examination: body mass index (BMI)-34.7 kg/m², waist circumference (WC)-112 cm, blood pressure 160/95 mmHg.

Laboratory studies: the general blood test and urine analysis were normal, the fasting plasma glucose was 9.2 mmol/l, HbA1C -9%, the biochemical blood test: total protein-71 g/l, urea-5.2 mmol/l, creatinine-102 μmol/l, uric acid-377 μmol/l, total bilirubin-10,1 mmol/l, aspartate aminotransferase-20 U/l, alanine aminotransferase-16,3 U/l, total cholesterol-7.9 mmol/l, triglycerides-2.94 mmol/l., total testosterone(T)-8.2 nmol/l., PSA-1.2 ng/ml.

Ultrasound examinations: the prostate gland - normal.

The patient was assigned to transdermal T-gel (50 mg/day). After 6 months of therapy, the body weight decreased by 11 kg, BMI by 3.5 kg/m², WC by 21 cm. In connection with the improvement of glycemic control, insulin was canceled. Biochemical and hormonal parameters after 6 months of therapy: the fasting plasma glucose-6.1 mmol/l, HbA1C-7.2%, total cholesterol-6.1 mmol/l, triglycerides-1.6 mmol/l, T-15.2 nmol/l. There were no side effects.

Conclusion: Testosterone replacement therapy in men with T2DM improves the control of carbohydrate and lipid metabolism.

O20 TYPE 1 DIABETES MELLITUS MANIFESTATION DURING PREGNANCY**I. Mamina**

The Research Institute of Obstetrics, Gynaecology and Reproductology Named after D.O. Ott

A 24-year-old pregnant female, gestational age 10 weeks, with no remarkable medical history and a family history of type 2 diabetes mellitus came at first prenatal visit. She had a 3 weeks history of polydipsia and polyuria. Her main complaint was nausea and morning weakness. No vomiting or abdominal pain.

In her tests blood glucose (fasting) was 8,1 mmol/l and there was a glycosuria. At the doctor her BG was 11,6 mml/l (1 hour after meal). Her HbA1c was 9,6%. Ultrasound examination revealed normal fetal development.

Insulin therapy was started immediately with insulin detemir 6 units/day and insulin aspart. She was instructed to perform glucose measurements 6-8 times a day with recording them in logbook and was directed to a special medical prenatal center with diagnosed type 1 diabetes mellitus. After that she underwent diabetes education and was started insulin pump therapy. Target BG was determined and the reasons for gradual decline of BG was explained.

She was high motivated and tried to reach BG even lower than target. At gestational age 14 weeks her HbA1c was 8%, at 20 weeks - 6,5% and after 26 weeks 5,5-5,8%. Ultrasound examination in the third trimester showed large for gestational age baby.

At 39 weeks the baby was delivered by cesarian section. Birth weight was 4300 grammes and fetal macrosomia was diagnosed. In the first 24 hours of post-natal life BG was 2,2 mmol/l, i/v glucose was given. In next 24 hours BG was 3,2 - 3,9 mmol/l. She was discharged with baby 7 days after C-section.

21 INFLUENCE OF THE 2ND BREAKFAST ON THE FREQUENCY OF HYPOGLYCEMIC STATES IN PATIENTS WITH DIABETES TYPE 2 AND ACUTE Q-WAVE MYOCARDIAL INFARCTION RECEIVING SULPHONILUREA MEDICATIONS

K. Sokueva, L. Ivanova, E. Kokova

Federal State Budgetary Educational Institution of Higher Education Kuban State Medical University of the Ministry of Healthcare of the Russian Federation, Department of Endocrinology of the Faculty of Advanced Studies and Professional Retraining of Specialists

Actuality: The influence of glycemia on the frequency of complications in patients with acute myocardial infarction (MI) and diabetes types 2 receiving sulfonylurea medications (SM) was not investigated early.

Objective: To reduce the frequency of hypoglycemic states by addition of the 2nd breakfast during the maximum time of action of gliclazide, glibenclamide or glimepiride in patients with diabetes types 2 and acute Q-wave myocardial infarction.

Materials and methods: We examined 90 patients with diabetes type 2 and acute MI with Q-wave receiving in the acute period gliclazide (n=30), glibenclamide (n=30) and glimepiride (n=30). The patients middle age was $55 \pm 3,7$ years. Treatment of all patients was conducted in the stroke unit according to standards of therapy of acute MI. There was not required thrombolysis and aortocoronary shunting for investigated patients. The blood level of glucose was analyzed hourly first day of admission in the hospital and 3 times (before a breakfast, a lunch and a dinner) and the 4th time in 2-3 hours after a breakfast during acute period of the MI.

Results: In 13 patients, 18 episodes of hypoglycemic states that were not followed by clinical symptomatology of a hypoglycemia and were not required intravenous administration of glucose were observed. From them 7 patients received glibenclamide (12 episodes of a hypoglycemia), 3 patients - gliclazide (3 episodes), 3 patients - glimepiride (3 episodes). Hypoglycemic states arose against the period of maximum action of sulphonylureas, blood sugar thus was from 3.4 mmol/l to 3.9 mmol/l. Considering appearance of a hypoglycemia against the period of maximum action of a preparation, the 2nd breakfast in 2 hours after reception of medications was appointed. The dose of glibenclamid was reduced by 50% in one patient. After introduction of the second breakfast hypoglycemic states disappeared in all groups.

Conclusions: The received results showed that hypoglycemic states in patients with diabetes 2 type and acute MI with Q-wave take place against the maximum action of any sulphonylureas and disappear after appointment of 2nd breakfasts in 2 hours after reception of SM.

**22 DIABETES MELLITUS` LATE DELAYED DIAGNOSIS DURING PREGNANCY
IS A CAUSE OF WERNICKE`S ENCEPHALOPATHY`S PROGRESS**

A. Konovalova, E. Kokova

Kuban State Medical University, Krasnodar

Patient M. 22 years old, pregnancy 15 weeks, entered the therapeutics department with complaints of asthenia, nausea, emesis after each meal, 20 kg`'s weight loss for 2 months.

On examination: the patient is in a soporose state. Blood pressure 110/70 mm Hg., heart rate 96 beats per minute, glycemia 13.1 mmol/L, glycosuria 55 mmol/l, ketonuria 5.5 mmol/L, HbA1c 5.6%, cLac 5.9 mmol/l, pH 7.496, cHCO₃ 27.9 mmol/l. Computer tomography of the brain: bilateral acute injury of thalamus and central gray substance of cerebrum.

Diagnosis: New onset diabetes mellitus, ketoacidosis` precoma with hyperlactacidemia, acute Wernicke`s encephalopathy.

Treatment: insulinotherapy, artificial pulmonary hyperventilation, shock and hypovolemia`s control, pulse-therapy with methylprednisolone, thiamine.

The patient is discharged in a satisfactory condition after the treatment. The pregnancy is saved.

Diabetes mellitus` patients, have a high risk of developing lactic acidosis. Especially these are pregnant women and patients with attendant pathology that can cause tissue hypoxia or a decrease in the Krebs cycle enzymes` activity. It could be the cause of toxicosis in the first trimester of pregnancy and a prolonged malnutrition. And she had a deficiency of vitamins, macro- and microelements (including thiamine) and the development of acute Wernicke`s encephalopathy, as a result.

Conclusion: Long-term malnutrition needs additional thiamine, parenteral nutrition with the predominant use of carbohydrates, due to its fast exhaustion in the body stock.

23 MIXED GENESIS NEPHROPATHY

E. Purgina*Almazov's National Medical Research Center*

A 27 years man with T1D from the age of 8 years (duration of the disease 19 years), who uses insulin pump therapy for the last 5 years, entered the hospital as planned for the correction of therapy and examination for complications of diabetes.

HbA1C, determined in the hospital, was 11.2%, until the hospitalization patient did not produce regular monitoring. He noted frequent hypoglycemia, mainly against the background of physical activity during working, control of glycemia was 2-3 times a day.

During the hospitalization the basal insulin infusion rate was corrected, the greatest attention deserve the basal rate in the early morning in connection with the patient has the dawn phenomenon. In addition, during the training, emphasis was placed on the need to perform insulin injections before meals, rather than after it, in connection with which it was possible to compensate hyperglycemia postprandially, including a significant reduction in the number of hypoglycemic episodes after meals. The patient was trained in the rational stopping of hypoglycemia and the correction of insulin therapy with time basal rate of insulin infusion during exercise, as the patient's work is associated with a high level of physical activity.

When ophthalmoscopy with dilated pupil confirmed by the presence of OU non-proliferative diabetic retinopathy without dynamics compared with the previous survey carried out a year ago.

The patient was examined by a neurologist, no data in favor of diabetic polyneuropathy were found. When the daily ECG monitoring episodes of silent myocardial ischemia, clinically significant arrhythmias have been identified.

During the examining diabetic nephropathy, attention was drawn to the expressed proteinuria: daily loss of albumin in urine was 1200 mg per day, blood creatinine 98 $\mu\text{mol/l}$, GFR 91 ml/min / 1,73 m², which corresponds to C1A3 CKD. As part of the nephroprotection therapy ACE inhibitors was initiated and statins, taking into account the non-target level of total cholesterol, LDL and triglycerides.

From the anamnesis: it's known that proteinuria in the range of 1000-1500 mg per day (2.6 to 3.5 g/l in the urine) was detected in a patient for the last 5 years, however, proteinuria in the overall analysis of urine revealed and before the onset of diabetes. In addition, the patient describes an episode of emergency hospitalization for acute pain in the lumbar region, changes in urine color to dark after the introduction of a certain drug (the patient doesn't remember the name, documents were not provided). In connection with these anamnetic data, there was an assumption about the contribution to the development of proteinuria not only diabetic nephropathy, but also concomitant kidney disease, probably chronic glomerulonephritis or the consequences of toxic kidney damage. In this regard, the patient was sent for further examination at the Institute of Nephrology, where at the moment the Genesis of proteinuria is being clarified.

Summary:

- Insulin pump therapy outside of full-time study of the patient may not lead to an improvement in glycemic control
- Patients with a long history of diabetes mellitus should be actively examined for autonomic neuropathy even in the absence of other neurological complications
- In male patients, it is advisable to actively use questionnaires (IIEF-5) to clarify the presence of urological pathology, including associated with diabetes
- The presence of concomitant kidney disease, not just diabetic nephropathy, can contribute to the severity of proteinuria

**24 MULTIDISCIPLINARY APPROACH TO TREATMENT DIABETIC FOOT
SYNDROME IN HOSPITAL VGKBSMP №10**

A.P. Volinkina, N.V. Naumova, S.V. Lobas
Voronezh City Clinical Emergency Hospital №10

Diabetes is a global health problem and it have leading position among socially significant disease. One of the most frequently dangerous complication of diabetes is diabetic foot syndrome. Frequency of occurrence is 20-70 % of cases diabetes. According to the register of Diabetic patient in Voronezh 3.2% patients have diabetic foot syndrome.

Results of treatment depend above all proper organization medical care, realised by joint effort of surgeon, endocrinologist and other specialists. In our hospital as a part of endocrinologic department 10 beds was profiled to patients with diabetic foot syndrome. Treatment of such patients provide by multidisciplinary crew, consisting of endocrinologist and chiropodist.

The following main elements of treatment are optimization of carbohydrate metabolism, antimicrobial therapy, correction diabetic polyneuropathy, MSS costs blood, plasmapheresis, hyperbaric oxygenation, physiotherapy, surgical methods, which widely represented (removal hyperceratosis, debridement, necrectomy, different level of amputation foot and whole extremity),modern methods immobilization, dressings.

During the years of working 706 patients received treatment. Middle age are 60-70 years, length of diabetes 10 and more years. 194 operations were accomplished, which accounted 27.4% the whole number patient. Since 2016 year we begin increased use of Total Contact Cast by patients with diabetic osteoartropathy.

Effective treatment diabetic foot syndrome put a number of tasks for practitioners. Such category need specialized multidisciplinary approach, certain skills of personnel, using a wide set of methods, modern methods immobilization, dressings.

**25 OBESITY AND IMPAIRED GLUCOSE TOLERANCE: COMPLEX THERAPY
WITH LIRAGLUTIDE 3.0 MG (CLINICAL CASE)*****O. Logvinova, E. Troshina****National Medical Research Center of Endocrinology*

The basis of the obesity treatment is modification of nutrition, physical activity and behavioral therapy. These methods are not always sufficient for management of disorders in eating behavior, achievement of clinically significant weight loss and retention of the results.

Patient with obesity grade II applied with complaints of excessive body weight and increased appetite for carbohydrates. His body weight was 115 kg, BMI – 39.4 kg/m², waist circumference – 101 cm. Medical history included a short-term unsuccessful attempt to lose weight with a diet. Fasting plasma glucose level was 5.6 mmol/l, after 120 minutes OGTT – 8.55, HbA1c – 6.2 %, insulin – 28.2 mIU/L, LDL-cholesterol – 3.3 mmol/l. Other parameters of biochemical blood test were within reference range. Patient's testosterone level was 6.0 nmol/l, LH – 4.4 mIU/mL, FSH – 5.8 mIU/mL. He did not take any medications. The endogenous hypercortisolism, hyperprolactinaemia and hypothyroidism were excluded. We started treating the patient with liraglutide from 0.6 to 3.0 mg and advised him to adhere to a hypocaloric diet with low content of animal fats and quickly digestible carbohydrates, and to increase physical activity. After 3 months of treatment with liraglutide 3.0 mg, bodyweight decreased on 12 kg (from 115 to 103 kg), WC on 9 cm (from 101 to 92 cm), BMI reached 35,3 kg/m². We also found improvements in the following lab parameters: glucose after 120 minutes OGTT – 7.2, HbA1c – 5.8 %, insulin – 15.2, LDL-cholesterol – 2.8, testosterone – 11.0. Our case shows that pharmacotherapy of obesity itself can improve not only anthropometric parameters, but also metabolic parameters, even without lipid-lowering, hypoglycemic and testosterone medications

26 CLINICAL CASE**S. Khalitova***2nd state clinic of Saratov*

37 y.o. female patient was diagnosed with type 1 diabetes in 1995. In family history father also has with type 1 diabetes since 1975. In the autumn of 2017, the patient was transferred from MDI insulin therapy (Novorapid, Levemir) to CSII. Before the beginning of insulin pump usage HbA1c level was 9.5%. In addition, the patient noted frequent hypoglycemia, as well as dawn phenomenon (fasting glucose levels were often about 10-12 mmol/l, but at 2-3 a.m. blood glucose was in normal range).

Patient started using Medtronic insulin pump with ability of monitoring blood glucose levels. According to the monitoring data for 3 days, the dawn phenomenon and hypoglycemia after meal were confirmed. Hypoglycemia is more related to non-correct CHO counting.

Basal insulin infusion rate was corrected in accordance to dawn phenomenon. Patient was given recommendation for more accurate CHO counting. In addition, sensitivity factor and insulin/CHO ratio were set in accordance with the time.

Neurologist and ophthalmologist examined the patient. Ophthalmoscopy with dilated pupil confirmed the presence of non-proliferative diabetic retinopathy without dynamics compared with the previous survey half a year ago (OU). Data of diabetic polyneuropathy were not found. Other complications of diabetes are absent.

Summary, to improve glycaemia control and decrease the chance of complications development:

1. Patient should study to count carbs exactly;
2. Be able to correct insulin therapy using temporal basal rate (physical activity, disease etc.);
3. HbA1c examination should be performed every three months.

27 MAGNETIC RESONANCE METHODS IN THE DIAGNOSIS OF DIABETIC ENCEPHALOPATHY IN PATIENTS WITH TYPE 1 DIABETES MELLITUS: A CLINICAL CASE

M. Rotkank, I. Samoylova, M. Matveeva

Siberian State Medical University, Tomsk, Russia

Relevance: diabetic encephalopathy is a frequent but rarely diagnosed complication in people with type 1 diabetes mellitus (DM). It leads to a decrease in the quality of self-monitoring and adherence to treatment by patients. Identification of organic manifestations of this complication and timely correction of them can help improve the state of carbohydrate metabolism in patients with type 1 DM.

The aim: to determine the significance of magnetic resonance methods of investigation in the diagnosis of diabetic encephalopathy in patients with type 1 DM.

Methods and results: a male patient V. with type 1 DM was examined; the patient's age – 28.8 years. The duration of type 1 DM is 7.6 years, during the last 3 years he has been on pump insulin therapy. The fasting plasma glucose level is 11.2mmol/l, HbA1c is 8.6%. Based on the results of continuous monitoring of glycemia by the device CareLink iPro-2 (Medtronic, USA) the coefficients of the variability of glycemia were calculated (calculator EasyGV): SD 5.3mmol/h, CONGA 7.6mmol/L, LI 4.7(mmol/L)2/hour, J-index 22.6, LBGI 2.6, HBGI 7.3, MODD 3.0mmol/L, MAGE 4.5mmol/L, ADRR 22.4. The overall performance of the MoCa-test corresponds to the presence of cognitive impairment (25 of 30 points). According to the MRI (Magnetom Symphony 1.5T) revealed atrophy of gray matter of the cerebral cortex. The results of proton magnetic resonance spectroscopy (1H-MPC) showed a decrease in creatine and phosphocreatine in hippocampal cells, indicating a decrease in total metabolism.

Conclusions: MRI of the brain makes it possible to diagnose atrophic changes in the gray matter of the cerebral cortex, the 1H-MRS of the brain reveals changes in the main metabolites of brain cells in patients with type 1 DM.

28 CLINICAL CASE OF LIVER INSULINOMA

I. Deminskaya

National Medical Research Center named by V.A. Almazov

The woman 46 years old in June 2017 began to wake up at night from a feeling of inner trembling, cold sweat, that were stopped by eating food. From July 3rd to July 10th she had three episodes of hypoglycemic coma, stopped by the intravenous introduction of 40% glucose. She was hospitalized in the hospital in the city Bologoye. For the period of hospitalization the level of her glycemia was 1,2-3,0. She was on a constant infusion of 5% glucose, then 40% glucose, on this background glycemia was 3.0-5.0.

At inspection: Insulin and c-peptide were not evaluated, functional tests were not performed due to low levels of glycemia.

According to the US - the formation of the right lobe of the liver 102x108x106 mm. The pancreas is not enlarged, the parenchyma is uniform.

According to the CT scan in the right lobe of the liver there was the formation occupying V, VII, VIII segments, with dimensions of 105x100x98 mm. The pancreas is not enlarged, the parenchyma is uniform, with no pathological density.

Of the «findings» also on the MRI of the of the brain - the syndrome of the empty Turkish saddle, otherwise without features. At a laboratory examination function of the anterior lobe of the pituitary gland is not compromised.

September 11th 2017 the patient was transferred to the clinic in St. Petersburg, with a constant infusion of 40% glucose. At admission, the glycemia is 1.9 mmol/l.

The patient was transferred to the department of Intensive Care and Reanimation, with a constant infusion of glucose 40% at a rate of 60-80 ml/h, a nasogastric tube was installed. In the case of turning off the infusomat for 10 minutes (transfer to another room) – level of glycemia 0.9 mmol/l.

According to the CT scan the formation of the right lobe of the liver was 140x150x160 mm. Pancreas without CT signs of pathological formations.

According to the laboratory examination - insulin 981.6 (17-173). C-peptide - 15.2 (0.78-5.19). Chromogranin A - 3210,1 mkg/l (<100).

The presence of endogenous hyperinsulinism did not cause doubts. The therapy with somatostatin analogs with octreotide was initiated, without the effect (insulin and C-peptide without dynamics).

To perform a surgical procedure, a follow-up examination is necessary to exclude the primary focus in the pancreas. According to the PET CT 68Ga-DOTA-TATE, the following centers of RFP accumulation are revealed: body and tail of the pancreas (two foci of 10 mm each), the active focus in the upper inner quadrant of the left breast (about 8 mm), accumulation of RFP in the right lobe of the liver. Surgical treatment was performed, all formations were removed. After the surgical treatment the level of glycemia within the target values.

According to the results of IHC: Neuroendocrine pancreatic tumor with the expression of synaptophysin, chromogranin A, CD56, VIP, somatostatin, somatostatin receptors of type 2; without expression of insulin, gastrin, serotonin, calcitonin, ACTH, type 5 somatostatin receptors. Ki-67 6%. Conclusion: neuroendocrine tumor Grade II.

Tumor in the mammary gland expresses synaptophysin, Chromogranin A, CD56, VIP, somatostatin receptors 2 and 5 type in 100% cells. Insulin is not expressed. Ki-67 - 90%.

Conclusion: neuroendocrine tumor, Grade III.

Liver tumors with expression of synaptophysin, chromogranin A, CD56, VIP, somatostatin, somatostatin receptors of type 2 in 100% of tumor cells and somatostatin receptors of type 5 in 10% of tumor cells, insulin in 40%, serotonin in single cells. The tumor does not express gastrin, calcitonin, ACTH. Ki-67 - 90%. Conclusion: neuroendocrine tumor, Grade III.

**29 COMBINED THERAPY OF A TYPE 2 DIABETES MELLITUS` PATIENT
WITH INSULIN AND EMPAGLYFLOSIN**

E. Kokova, A. Konovalova

Kuban State Medical University, Krasnodar, Russian Federation

Patient P, 56 years old, entered the therapeutic department with symptoms of diabetes mellitus` decompensation. He has type 2 diabetes for 10 years. The patient is on insulin therapy for last 5 years: 60 Units/day of insulin of prolonged action and 48 Units/day of short action. He entered with glycaemia - more than 8.5 mmol/l fasting and more than 13.0 mmol/l during the day.

There was hyperglycemia, when trying to lower the insulin`s dose and latent hypoglycemia with an increasing the dose. It couldn`t be elicited because of following post-hypoglycemic hyperglycemia. Empaglyflosin was added to the treatment. The next day there was a possibility to reduce the insulin`s dose of prolonged action to 21 U/day, short - up to 38 U/day, after the beginning of the combined therapy. Glycaemia was within 4.9-8.8 mmol/l during the 24 hours. Later complications after diabetes lead to early patients` death and develop without adequate glyceic control. Hidden hypoglycemia and post-hypoglycemic hyperglycemia are especially dangerous. It occurs in the case of an incorrectly selected dose of insulin.

Conclusion: The addition of empaglyflosin to the therapy leads to insulin`s dose reduction and the normalization of glycaemia among patients with type 2 diabetes mellitus at high doses of insulin and unsatisfactory glyceic control.

30 CASE OF DEVELOPING DIABETES AFTER IMMUNOTHERAPY IN YOUNG WOMAN

L. Makhova, MD

Outpatient clinic 57, Saint-Petersburg, Russia

Female 20 y.o. Osteosarcoma was developed in right iliac bone pT2NxM0 L0 Pn0G3 in 13 years. She was treated with chemotherapy, radiation therapy and surgery.

Current body weight 40 kg, height 159 cm BMI 16 kg/m².

In 16 y.o. was diagnosed autoimmune thyroiditis (TPO 395). She received levothyroxine 100 mcg. TSH 67 is still high despite the constant treatment.

In 2017 was started immunotherapy.

in December 2017 has diagnosed diabetes after immunotherapy (anti-PD). It was accidentally detected during routine blood tests, typical symptoms of hyperglycemia were absent.

Glucose level at the beginning was 19 mmol/l. HbA1c 7,5%. Anti-islet autoantibodies, C-peptide were not assessed.

She received insulin Lantus 8 Units + insulin Actrapid depending on glucose levels before meal 2-8 Units. Two weeks later was added Metformin 500 BID.

Endocrinologist has recommended low carbohydrate diet (avoiding simple carbohydrates at all, fruits, and eating no more than 2-4 tablespoons of porridge per meal). She has lost weight from 42 to 38 kg, her appetite has decreased.

Laboratory tests: FPG 7,4 mmol/l, Creatinine 25,4 mcmol/l, Liver tests were normal., Calcium 2,20 mmol/l, Iron 7,30 mmol/l, TSH 67 mU/l

Hematology: HGB 93g/l, HCT 27,9%, MCV 87,7, Plt 130*10⁹, RBC 3,2*10¹², WBC 4,0 *10⁹

In my office was educated how to count carbohydrates, the treatment was changed to a basis-bolus insulin Lantus 8 Units + insulin Apidra, Metformin was stopped. Was expanded the list of acceptable products. The body weight was increased to 40 kg.

TDD 0,4*40=16 U

Carb/Ins = 500/16

Carb/Ins = 31:1

CF = 100/16 CF = 6

Real doses: Carb/Ins = 12:1 and 8:1 at evening CF = 2,5

31 USING ON-LINE PROGRAM OF GOOD NUTRITION AND WRIGHT DIET MAY REDUCE THE RISKS OF DIABETES MELLITUS IN THE FUTURE

V. Krylov

Sechenov First Moscow State Medical University

Objectives: It is too much easier and cheaper to combat obesity, than in the future to treat diabetes mellitus and its complications.

Methods: We used an online system for patient education (www.rightdiet.ru) based on the video lessons, full of humor, pictures, and cartoons to convey the necessary information on good nutrition, necessary to do exercises and the need for exposure to the sun to our patients.

Results: A patient was in touch with a doctor-endocrinologist in the case of any additional questions.

We examined data from a survey of 350 patients registered in the online system and 30 patients control group who received the same recommendations on the appointment.

The average weight loss was 7,3 kg in the main group. Regular physical activity was higher in the main group compared with the control one of 245 and 75 minutes per week respectively.

Watching the short movies, the patients formed the habits of good nutrition during the first month already, which includes a diet with restriction of fat, digestible carbohydrates and daily consumption of low-fat dairy products, slow carbohydrates, protein and fiber. Were also presented recommendations for compliance with the physical activity, as well as vitamin D consumption.

Conclusions: Very important how we can make spreading of the material. Often the patient has no opportunity to go to the doctor for an appointment, and during the reception, it is not always possible to discuss all aspects, and even if it was possible, some information is forgotten by patients. So, we need to improve the quality of information material, including using online technologies to improve the quality and duration of life of our patients.

**32 VARIABILITY OF GLYCEMIA IN A PREMATURE NEWBORN:
A CLINICAL CASE**

A. Bushmanova, T. Sivolobova, M. Rotkank
Siberian State Medical University

Relevance: hyperglycemia is the most common metabolic disorder in premature newborns. Due to their low body weight, continuous monitoring of blood glucose levels can be a trigger factor of ations.

Objective: to assess the negative impact of the traditional method of determining blood glucose levels in preterm infants.

Methods and results: boy N., born, gestational age 27 weeks. Body weight at birth 900 g. On day 6, an increase in glycemia to 10.8 mmol / l was detected. We assigned insulin therapy (Humulin). During the hospitalization there were fluctuations in the level of glycemia from 1.8 mmol / l to 30 mmol / l, correction of insulin therapy was performed - it was applied as a single injection of 0.05-0.1 U / kg, and titration of insulin during the day to maintain a normal level of blood glucose. Every day 7-10 punctures of the skin for blood sampling were performed. Episodes of hyperglycemia proceeded against the background of the infectious process and the disruption of blood clotting, in connection with which the patient repeatedly bleed from places of blood sampling, which required the transfusion of fresh frozen plasma. On the 2^{6th} day, normoglycemia was achieved, insulin therapy was abolished.

Conclusions: Continuous monitoring of glycemia using non-invasive sensors in preterm infants could avoid multiple blood sampling, complications, and facilitate the timely administration of treatment

33 CLINICAL CASE***E. Kalabina, A. Kuliashova****Samara City Children Clinical Hospital №1*

Diabetes mellitus (DM) is one of the most common human diseases. MODY diabetes combines heterogeneous group of diseases with autosomal dominant inheritance. Mutations in different genes lead to dysfunction of β -cells, which leads to disorders of carbohydrate metabolism. MODY-2 has the easiest course - there is moderate fasting hyperglycemia (5.5-8 mmol/l). The development of ketoacidosis is not characteristic.

Girl D, 6 years old. She was admitted at the age of 3 years to the endocrinology Department with a diagnosis of «diabetes mellitus, diagnosed for the first time». From anamnesis: during planned tests she was diagnosed with fasting hyperglycemia: 7.0 - 6,5 - 9,8 mmol/l, there were no complaints of polyuria to polydipsia. Family history: grandmother and grandfather from dad watched endocrinologist for diabetes type 2 diabetes that are on oral hypoglycemic therapy. The father revealed impaired fasting glycemia, glyated hemoglobin 7.0%. Treatment is not received till now.

In the first visit, the blood glucose was 9.8 mmol/l, blood ketones negative, blood gases: pH-7, 418, BEF was 2.4. The glyated hemoglobin was 6.6%, all the time the glucose on an empty stomach: 6.5-8.2 mm/l, blood glucose during the day was 5.0-5.8 mm/l. Basal C-peptide level-0.476 ng / ml (normal 1.1-5.0), insulin-less than 2.0 Mme/ml (normal 2.6-24.9). Autoimmune markers of diabetes-negative. According to the survey results and the history of the disease, it was decided to conduct a molecular genetic study by parallel sequencing in monogenic forms of diabetes. Revealed heterozygous mutation in the GCK gene p.F150Y. Mutation is described in MODY-2.

