ABSTRACTS

XIIth CONFERENCE OF YOUNG PHYSITIANS ST. ANNE'S FACULTY HOSPITAL IN BRNO 7th JUNE 2006

M. Nevrlý, P. Ressner, I. Nestrašil, H. Vránová, P. Kaňovský (Department of Neurology, University Hospital and Palacký University Medical School, Olomouc): **Plasma homocysteine levels in Parkinson's disease patients – effect of levodopa and entacapone treatment. A pilot study.**

Homocysteine (Hcy) is a risk factor for vascular diseases, dementia, and cognitive impairment. Elevated plasma Hcy levels were found in Parkinson's disease (PD) patients treated with levodopa. This has been verified by several retrospective studies. The object of this study was to compare levels of Hcy in regular levodopa treatment and in combined levodopa and inhibitor catechol-O-methyltransferase (COMT) treatment. Patients indicated for levodopa and entacapone treatment were divided into 3 groups: (1) PD patients long-term treated with levodopa, in whom Comtan® was added to the treatment; (2) levodopa-naive PD patients, in whom levodopa treatment was started and entacapone was added later (after 4 weeks of treatment); (3) control group (CG) subjects in whom Hcy levels were assessed in the same intervals as in patients taking levodopa and entacapone. CG subjects did not suffer from any disease affecting Hcy levels. In group 1 of 15 patients the following Hcy plasma levels were found – mean ± SD (min – max) (umol/l): 20.8 ± 7.5 (13.3–44.4) and with added entacapone 15.1 ± 6.1 (11.9–31.1); in group 2 of 6 patients the Hcy levels found were 15.7 ± 4.2 (10.6–22.1) and at week 8 of concurrent levodopa and entacapone treatment 13.6 ± 3.4 (8.5–8.1); in CG of 21 patients Hcy levels of 9.7 ± 2.8 (6.6–16.5 were found).

The results of this pilot study confirm the presence of elevated plasma Hcy concentrations in patients with long-term levodopa treatment. Combined levodopa and entacapone treatment apparently decreases plasma Hcy levels.

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A biometry examination, in other words the measurement of eye axial length, is needed in every patient before cataract surgery. Together with keratometry it serves the intraocular lens power calculation. The purpose of our study was to determine whether contact and immersion A-scan ultrasound techniques produce comparable measurements of the magnitude of eye axial length.

The axial length of 60 non-paired eyes was measured, using both contact and immersion technique. It was measured with an Alcon Ocuscan machine. The compared eye axial length was the average of 10 values automatically inserted by the machine. The statistical methods such as the non-parametric sign test and the Spearman's correlative coefficient were used.

There was a median eye axial length of 23.08mm (min.19.31mm, max. 25.90mm), using the contact technique, comparing to a median of 23.16mm (min.19.38mm, max.25.82mm) obtained by the immersion technique. The standard deviation of the measurement of both techniques was less than 0.1mm. A statistically significant difference was proved between the contact and the immersion technique (p=0.002). There was a significant correlation between both methods (p=0.0).

The eye axial length obtained by the immersion technique averaged 0.1mm longer than those obtained by the contact technique. Both techniques give consistent results, but the difference between axial lengths measured by the two techniques has implications for a choice of intraocular lens power. Biometry is therefore of great importance for obtaining an accurate postoperative target refraction in cataract surgery, which is becoming part of refractive surgery today.

K. Kollarová, M. Nevrlý, P. Ressner, R. Herzig, P. Kaňovský (Department of Neurology, University Hospital and Palacký University Medical School, Olomouc): **Genetics of Parkinson's disease – age at onset and heredity.**

Parkinson's disease (PD) is a common neurodegenerative age-dependent disorder, second in prevalence only to Alzheimer's disease. PD affects approximately 1 % of the population at the age of 65 years. PD has a wide variability in the onset age. Familial forms compose less than 10 %. Young age at PD onset has been linked to its familial occurrence, because in several PD pedigrees probands frequently younger than 50 years were identified. However, there are only few prospective studies supporting this hypothesis, also because of the rarity of large parkinsonian families, low heritability, and heterogeneity of PD. The aim of this study was to assess the participation of genetic factors in the young age of PD onset and the familial occurrence of PD.

One hundred and forty-three of PD patients, regularly followed up in a tertiary PD centre, were asked to fill in a structured questionnaire. Age at PD onset, progression, familial occurrence, the relationship among the afflicted kindred, and character and onset of PD symptoms were the main observed parameters. One hundred of responders cooperated properly and resent the questionnaires. Fifty males aged 56.28 (± 10.4) and 50 females aged 63.8 (±10.9) years were involved in the study.

A family history of PD was present in 13 (7 males, 6 females) out of the 100 PD patients (13 %). The mean PD onset age was 47.8 (± 8.95) years in males and 52.8 (± 12.35) years in females. There was a predominantly paternal heredity in males and a prevalent maternal heredity in females.

This survey confirmed an association between the familial history and the younger age at PD onset. The presence of some phenomenon of anticipation in the familial form of PD can be also supposed in accordance with the young age at disease onset found in PD patients' descendants. It is still questionable if the genes contributing to PD susceptibility are also responsible for the age at PD onset. The mutation of that gene with high penetration would significantly change the rate of neurodegeneration and consequently the age at PD onset.

E. Čížková, R. Uhmannová, Z. Hlinomazová (Department of Ophthalmology, Faculty of Medicine, Masaryk University, Brno Bohunice Faculty Hospital): **Malignant melanoma of the uvea in the year 2005 at the Department of Ophthalmology, Brno Bohunice Faculty Hospital.**

Malignant melanoma of the uvea (MMU) is the most common intraocular tumour among adults. MMU is a rare tumour with an incidence of 0.1–2.3 cases/100,000.

The aim of the retrospective study was to evaluate the timeliness of diagnoses of MMU in a group consisting of all patients who were diagnosed with MMU in the year 2005. Between 1 Jan. 2005 and 31 Dec. 2005 the Department of Ophthalmology diagnosed MMU in 11 patients (7 women and 4 men) with an average age of 66.9 ± 5.19. The group of 11 patients was analysed in accordance with various criteria: age, sex, localisation of MMU (iris, ciliary body, choroid), clinical signs of MMU, size of MMU, methods used in diagnostics, treatment, histological type, immunohistochemical markers of MMU, TNM classification, and metastases.

Malignant melanoma of the choroid was diagnosed in 8 cases, malignant melanoma of the ciliary body in 2 cases, and malignant melanoma of the iris in 1 patient. The tumour was asymptomatic in 3 patients; in all other cases it was manifested with a decrease of visual acuity. The patient with malignant melanoma of the iris was treated by partial therapeutic iridectomy and lamellar keratectomy, 3 patients were treated by brachytherapy, and 7 patients had to undergo enucleation. At the time of determination of the diagnosis of MMU metastases were not present in any of the 11 patients.

Despite current diagnostic possibilities the majority of MMU are diagnosed at a late stage, which requires a radical therapeutic solution. Knowledge in a variety of clinical performance of MMU can help in the early discovery of MMU, which will afford opportunities for a therapy that particularly preserves visual functions.

V. Polanská[1], Z. Hlinomazová[1], Z. Fojtík[2], P. Němec[3] ([1]Department of Ophthalmology, Faculty of Medicine, Masaryk University, Faculty Hospital Brno, [2]Internal Hemato-oncology Department, Masaryk University, Faculty Hospital Brno, [3]Second Department of Internal Medicine, Faculty of Medicine, Masaryk University, St. Anne's Faculty Hospital in Brno): **The dry eye syndrome and its connection with seropositivity concerning patients with rheumatoid arthritis**.

The objective of this study was to evaluate the occurrence of the dry eye syndrome in patients with rheumatoid arthritis and to evaluate the connection between the incidence of the dry eye syndrome and seropositivity in patients with rheumatoid arthritis.

The group consisted of 36 patients, 6 men and 30 women, the average age being 57 (SD 10.5). There were 25 seropositive patients and 11 seronegative patients in the group. Schirmer's test was carried out in all the patients. The presence of Lid Parallel Conjunctival Folds -LIPCOF- was determined by slit lamp biomicroscopy, Tear Film Break-Up Time – BUT – was also measured. We used ocular surface staining after fluorescein installation. The statistical evaluation of the connection between rheumatoid arthritis incidence and the dry eye syndrome was carried out by means of Pearson's association test for nominal variables.

The Schirmer's test proved 21 patients as positive (58.3 %), BUT was found positive in 28 patients (77.7 %). Conjunctival folds were present only in 13 patients (36.9 %). Pathological findings during ocular surface staining were found in 7 patients (19.4 %). After a complex assessment we found dry eye syndrome in 30 patients (83.3 %). In 25 seropositive patients the dry eye syndrome was present in 21 cases, in 11 seronegative patients it was present in 9 cases. Statistically, no connection was proved between the incidence of seropositivity and the dry eye syndrome.

Keratoconjunctivitis sicca is the most frequent ocular complication in patients with rheumatoid arthritis. This study shows that a defect of the lipid component in these patients is a more frequent problem. A correct and timely diagnosis of the dry eye syndrome and subsequent initiation of local therapy are therefore extremely important and can prevent serious ocular complications.

S. Vykutilová (Department of Dermatovenereology, Faculty Hospital, Faculty of Medicine, Masaryk university, Brno): **Bullous diseases in an immune incompetent patient; differential diagnosis.**

Bullous diseases are characterised by an eruption of blisters or bullas of indifferent localisations and different extent. They can be presented as acute, subacute or chronic blistering skin disease. The rupture of continuity in epidermis or dermoepidermal junction is typical of these diseases.

Aetiological factors are heterogeneous. Bullous diseases may be caused by genetic defects (epidermolysis bullosa), immunological processes (bulbous pemphigoid), immune complex (drug reactions), but also by virus agents (varicella).

The author describes a case report of a 65-year-old man with multiple myeloma, after chemotherapy, allograft of bone marrow, with a disseminated eruption of blisters. At the beginning it was supposed to be a drug reaction. Punch biopsy and serological examination showed a new diagnosis: generalised varicella zoster. His health state became worse in a few days, it has progressed in somnolence, sopor and metabolic disruption. The patient died in 5 days due to varicella zoster encephalitis and coincidental bronchopneumonia.

*M. Král, P. Ressner, P. Kaňovský (*Department of Neurology, Palacký University, University Hospital, Olomouc): **Spinocerebellar ataxia with late onset: a case report with video presentation.**

Hereditary spinocerebellar ataxias (SCA) include a very heterogeneous group of diseases that had for a long time been defined just on the basis of clinical presentation. Lately, advances in genetic diagnostics

have allowed a much more transparent classification of SCA based on identification of molecular defects. Here we present a case of a 72-year-old woman with a 3-year progressive bulbar syndrome and a 1-year progressive gait disturbance with a paleocerebellar and bilateral neocerebellar syndrome and with parkinsonian signs (dominant bradykinesia and rigidity of upper extremities). The medical history includes Sjögren's syndrome diagnosed in 2003 and asymptomatic right vertebral arterial stenosis.

The differential diagnosis includes multiple system atrophy and progressive supranuclear palsy but, considering the dominating symptoms of cerebellar impairment, these are less likely. The available genetic tests for SCA are negative but it is possible that this case presents a form of SCA for which genetic testing is not available in the Czech Republic.

S. Zgažarová (First Department of Dermatovenereology, St. Anne's Faculty Hospital, Faculty of Medicine, Masaryk University, Brno): **Pyoderma gangrenosum – a case report.**

Pyoderma gangrenosum is a rare, non-infectious neutrophilic dermatosis characterised by painful pustules or nodules that spread concentrically and become rapidly necrotic and ulcerated in the central part. The aetiology of pyoderma gangrenosum remains unknown (idiopathic); however, it is thought to be an autoimmune disorder.

The case reports a 57-year-old man with pyoderma gangrenosum, who has been treated for rheumatoid arthritis since the age of 25 years. His medication has recently included Prednisone 5 mg once a day and non-steroidal antiphlogistics.

The patient was hospitalised at the First Department of Dermatovenereology because of a large two months lasting ulceration on his left crus. The diagnosis of pyoderma gangrenosum was established on the basis of clinical manifestation. The histopathological finding did not exclude this diagnosis. A fast healing was induced after the local applications of corticosteroids. Under the term of complete examination an adenocarcinoma of the prostate was detected, and therefore the patient was handed over to the care of the Department of Urology, where radical prostatectomy was carried out. The ulceration was healed, the patient has been kept monitored at the urology ward, where systemic treatment with antiandrogens has been started.

In case of a suspicion of pyoderma gangrenosum a complete examination of the patient is necessary to eliminate possible connections including paraneoplastic ones.

This case is interesting because there is a coincidence of two diseases (rheumatoid arthritis and adenocarcinoma of prostate), which could exert an aetiology of pyoderma gangrenosum.

N. Bohunická, Š. Skorkovská, S. Synek, R. Kaňovský, Z. Mašková, M. Synková (Department of Ophthalmology and Optometry, St. Anne's Faculty Hospital, Faculty of Medicine, Masaryk University, Brno):

Diabetics in a population of patients treated by pars plana vitrectomy.

The purpose of this report is to evaluate the visual and anatomic outcomes following pars plana vitrectomy (PPV) for complications of diabetic retinopathy (DR), and to assess risk factors that might influence the visual outcome even after a successful diabetic vitrectomy.

Medical records of 43 diabetic patients of both 1st and 2nd type of diabetes, who underwent vitrectomy for complications of DR during the period of January 2004 to December 2005, were analysed retrospectively. The following parameters were reviewed: age, gender, body mass index, type and duration of diabetes, glucose control, fundus finding – complications of proliferative DR and diabetic maculopathy, which were indications for vitrectomy. Surgical techniques included standard PPV with the possibility of endolaser retinal photocoagulation. Some of the patients also underwent cataract extraction with or without intraocular lens implantation, peeling of the inner limiting membrane, relaxing retinotomy, and endotamponing of silicon oil, expansive gas, or air. Postoperative follow-up time ranged from 6 to 16 months (median 12 months).

The results of the retrospective analysis showed the absence of preoperative retinal laser photocoagulation in 30.2 % of the eyes. Seventy-two per cent of the patients had poorly controlled diabetes,

which often was associated with systemic complications (in 74 % of the patients). In most cases the vitrectomy was performed late – at the time when serious progressive stages of DR were diagnosed. Thirty-three per cent of the patients had preoperative visual acuity of unfavourable prognosis (worse than 0.0167). Post-vitrectomy, 83.7 % of the eyes showed early or late complications, 70 % of which were complications with unfavourable prognosis, such as vitreous bleeding, retinal detachment, rubeosis iridis, macular ischemia or edema, glaucoma, optic disc atrophy. Six months postoperatively, visual improvement was achieved in 44.2 % of the eyes, visual acuity remained unchanged in 23.26 % and decreased in 32.56 % of the eyes; 41.8 % of the eyes showed visual acuity > or = 0.1.

Conclusively, anatomically successful diabetic vitrectomy is not always followed by improvement in visual acuity. The optimal timing of vitrectomy (before the most serious complications of DR occur) is very important not only in order to obtain good visual acuity but also to maintain good vision for a long time even after a successful vitrectomy. The need of PPV might be lowered by frequent follow-up eye examinations and a timely full-scatter photocoagulation.

M. Krejčí, T. Novotný, Z. Gregor, J. Podlaha, S. Wasiková, B. Horký (Second Department of Surgery, St. Anne's Faculty Hospital, Brno): **Vascular surgery at the Second Department of Surgery, St. Anne's Faculty Hospital, Brno, in the years 2003–2005.**

The aim of the study is to present the spectrum of vascular procedures carried out at our department during the years 2003 to 2005.

In the carotid region there were 185 operations for carotid stenosis (144 men, 41 women, average age 65.9 years). Carotid endarterectomy with venous (86) or prosthetic (77) patch angioplasty was the most frequent procedure. In 20 % an intraluminal shunt was used. There were 6 strokes (3.24 %) in the perioperative period. Five patients were operated for vascular injury. There were no infectious complications.

We did 39 thrombembolectomies in the upper extremities (15 men, 24 women, average age 74 years). Two women were operated for the thoracic outlet syndrome, three men for the subclavian steal syndrome. Six patients were operated for injury of the brachial or antebrachial vessels. There were no infectious complications.

During the studied years 383 arteriovenous fistulas for hemodialysis were established (232 according to Brescia-Cimino, 144 cubital shunts). In 49 cases thrombectomy was done. We solved 4 infections (2 native shunts, 2 prosthetic), with the incidence of 0.78 %.

For aortic aneuryms, 118 men and 17 women were operated (107 electively, 28 urgently). There was no perioperative death. Furthermore, 144 patients were operated for atherosclerotic occlusive disease. In 24 cases we solved anastomotic pseudoaneurysm in the groin. Thirty-five thrombectomies were done. In 13 patients vascular prosthetic infection was treated, 9 of them being implanted before 2003. The incidence rate is 1.46 %.

In 227 patients (180 men, 47 women, average age 61.3 years) femoropopliteal bypass was implanted, 141 of them using autologous vein. In 72 cases the lower anastomosis was situated below the knee. In 17 patients short supra-infra genu venous bypass was implanted for popliteal artery aneurysm. Forty-one profundoplasties and 30 anastomotic repairs were carried out. We also solved 41 postpunctional groin injuries. Furthermore, 117 thrombectomies were done. In 4 cases bypass infection was treated; the incidence rate is 0.88 %.

In the femur-distal region 18 crural bypasses (17 venous, 1 prosthetic) were implanted, with a distal anastomosis to the posterior tibial artery in 16 cases. Thirty-six pedal reconstructions (33 venous, 3 composite grafts) were implanted, distal anastomosis to dorsal pedal artery in 27 cases. In 22 patients the arteries were insufficient for reconstruction. We also did 29 crural thrombembolectomies. One pedal infection was solved (bypass implanted in 2002).

During the 3 years we did 39 lumbar sympathectomies, 25 perioperative angioplasties (10 in the iliac, 15 in the femoral region) and 17 extra-anatomic reconstructions. From the 220 amputations 92 were localised to the foot, 13 were crural and 101 femoral amputations and 9 hip exarticulations; primary amputation rate is 25.6 %.

We summarise that both the spectrum and the results of our operations are fully comparable with other vascular surgical centres.

M. Micenková, M. Dufincová, R. Herzig, S. Bučil, P. Kaňovský (Department of Neurology, University Hospital and Palacký University Medical School, Olomouc): **Partial lesion of the oculomotor nerve.**

The oculomotor nerve can be affected at any of its parts – from the nucleus in the mesencephalon through the fissura orbitalis superior to the orbita. An assessment of the clinical symptoms depending on the lesion localisation can be helpful when making topical diagnostics. Aneurysm of the internal carotid artery as well as of the PcoA, posterior communicating artery and diabetic cranial neuropathy belong to the most frequent reasons of its lesion.

In our case a 62-year-old male with diabetes mellitus of type II, treated with peroral antidiabetics since 1990, suffered from recurrent ptosis of the right upper eyelid and divergent strabismus since his age of 61. A cerebrospinal fluid examination revealed a serosal inflammation of the central nervous system with a positivity of herpes simplex virus type 1 antibodies at 1: 16 titre. Visual evoked potentials found a prechiasmatic demyelinating lesion. Magnetic resonance angiography showed a fetal circulation on the right side with a wider PCoA and superior cerebellar artery. The patient's symptoms partially regressed after a one-month supportive treatment.

In this case, three possible aetiological reasons were present as an underlying condition of the partial third nerve palsy: (1) vascular pathology, (2) diabetic cranial neuropathy, and (3) cranial neuritis .

M. Dufincová, M. Micenková, R. Herzig, I. Vlachová, P. Kaňovský (Department of Neurology, University Hospital and Palacký University Medical School, Olomouc): **Locked-in syndrome.**

The locked-in syndrome is characterised by tetraplegia and lower cranial nerve palsies in the conscious patient. Vertical eye movements and blinking are the only means of communication. The aetiology is multifactorial, with the lesion usually localised in the ventral pons.

In our case a 33-year-old female has been followed by neurologists since 1989 due to giant aneurysms of the right vertebral and the basilar artery, and obstruction hydrocephalus. The aneurysms were treated by wrapping and the hydrocephalus was treated by a ventriculoatrial shunt in the same year. In August 2005 she was admitted to the Department of Neurosurgery for suspicion of shunt malfunction. At the admission she was unconscious and in spastic body position. Following the ventriculoatrial shunt replacement, the patient was conscious, there were only vertical movements of both eyes present, and only mild movement of the circumoral musculature. All the reflexes of the medulla oblongata were present. A spastic quadriplegia with accentuation on the right side was observed. The patient was in a locked-in state.

Infarction of the ventral part of the pons was revealed by computerised tomography and magnetic resonance imaging of the brain. After intensive rehabilitation, the patient is able to communicate using simple words and movements of her eyes, and using the nuchal musculature.

In this case pontic infarction was probably caused by chronic pulsation of the basilar artery.

Z. Chovancová, I. Nestrašil, J. Dufek, R. Herzig, P. Kaňovský (Department of Neurology, University Hospital and Palacký University Medical School, Olomouc): **Peripheral nerve injury in the central nervous system degeneration: a pilot study.**

Neurodegenerative diseases (NDs) are the largest group of central and peripheral system disorders. Their cause is an early destruction or degeneration of the neurons. Some of the NDs have a progressive course and are genetically conditioned. The aim of this study was to validate a hypothesis about the presence of a concomitant peripheral nerve injury in patients suffering from NDs. EMG examination was performed in 7 patients (4 males, 3 females: aged 58–78, mean 68 ± 14.7 years) suffering from diagnosed NDs and treated at the Department of Neurology, University Hospital, Olomouc, Czech Republic. Polyneuropathy was diagnosed in 2 (28.6 %) out of the 7 patients. The axonal symmetric polyneuropathy of the lower limbs was found in one patient suffering from spinocerebellar atrophy. In the other patient suffering from Alzheimer's dementia, light distal symmetric-axonal demyelinating

sensory-motor polyneuropathy of the lower limbs with a chronic course was diagnosed. Polyneuropathy was not found in the rest of the patients. With respect to the small set of the patients it is impossible to clarify the relationship between NDs and EMG determination of the peripheral nerve injury. Further studies performed in larger sets of patients are needed.

T. Novotný, M. Krejčí, J. Jeřábek, J. Buček (Second Department of Surgery, St. Anne's Faculty Hospital, Faculty of Medicine, Masaryk University, Brno): **Retromuscular mesh repair of incisional hernia according to Rives.**

Incisional hernia repair is a very common surgical procedure. Although many surgical methods were developed, we cannot consider the results to be satisfactory. The recurrence rate is still high.

A significant improvement of the outcome was expected after the mesh hernioplasty became a standard and widely used procedure. Current studies show that not just the usage of mesh itself but also the mesh placement into different anatomically preformed spaces between the layers of the abdominal wall make big outcome differences.

We present our results with retromuscular sublay mesh hernia repair according to Rives. This method is used in our department for the treatment of large incisional hernia after medial laparotomy. We have used this procedure in a group of 65 patients. The mean follow-up period was 10 months (1–49 months) and during this period there were no recurrences observed. However, we are aware of the very short follow-up time and we expect recurrences in the future. The complication rate was acceptable – three times secondary wound healing, one temporary cardiopulmonary decompensation after operation in a patient with chronic obstructive pulmonary disease that was not diagnosed before operation. Up to now there was no death, no organ injury, no mesh infection, and no enterocutaneous fistula formation.

We conclude that the retromuscular hernia repair according to Rives appears to be an appropriate method for the management of large ventral hernias in the course of linea alba with excellent results and a very low complication rate.

S. Wasiková, P. Piskač (Second Department of Surgery, St. Anne's Faculty Hospital and Faculty of Medicine, Masaryk University, Brno): **Percutaneous endoscopic gastrostomy.**

Percutaneous endoscopic gastrostomy (PEG) is a procedure for the provision of nutrients in patients who require long-term enteral feeding but are unable to maintain sufficient oral intake. PEG should be considered for patients who have an intact, functional gastrointestinal tract.

The most common indications for PEG are neurological conditions associated with impaired swallowing, artificial pulmonary ventilation, neoplasms of the oropharynx, larynx and esophagus, tracheoesophageal fistula, and facial trauma.

The following are contraindications to PEG use: ascites, peritonitis, septic status, absent transillumination of the abdominal wall, florid gastric ulcer, ileus.

The most widely used technique of PEG is the "pull" method. A gastroscope is inserted through the mouth into the stomach, the light of the gastroscope is inspected through the anterior abdominal wall, the skin over the light is anesthetised, and through a small incision the needle penetrates into the stomach lumen. Then the needle is removed and the cannula is left in place through which a guidewire is introduced into the gastric lumen. The guidewire is grasped and pulled out of the mouth. The feeding tube is tied up to the upper end of the guidewire and by pulling the other end the tube is dragged right into the stomach.

In our department the first PEG was performed in 1993. In our study (1/2004–4/2006) we worked with a group of 130 patients. The PEG was successfully established in 124 cases. There were six failures due to absent transillumination of the abdominal wall, florid gastric ulcers, active resistance of the patient, recurrence of hernia containing small intestine after performing the upper middle laparotomy, impossibility of establishing the endoscope (twice).

PEG is a relatively easy way to provide enteral intake. Compared to other methods of approaching enteral nutrition, PEG is a successful, safe, and effective procedure. A limitation is represented by the stomach accessibility for the endoscope.

M. Hamanová (Department of Clinical Immunology and Allergology, Faculty of Medicine, University Centre for Primary Immunodeficiencies, Masaryk University, Brno): **Dynamics of natural antibody formation in the postnatal period**.

Natural antibodies are immunoglobulins present in the serum of healthy individuals even in the absence of deliberate immunisation. They are supposed to a play an important role in early defence against infectious agents, in removing old cells, and in the prevention of autoimmune diseases.

In the repertoire of natural antibodies, anti-galactosyl antibodies constitute an important fraction (1–8 % of the total amount of immunoglobulins). These antibodies were previously determined by the direct hemagglutination test with rabbit erythrocytes as xenoagglutinins.

We set up the ELISA method for isotype-specific detection of human natural IgM, IgG and IgA antibodies to the Galalfa1–3Gal disaccharide epitope. The levels of these isotypes were determined in the mothers' sera (n=20), cord blood sera, and samples from their infants obtained 6, 12 and 24 months after birth.

Our results showed that only IgG natural antibodies were present in cord blood. Samples obtained at the age of 12 months showed measurable levels of IgM and IgA anti-galactosyl antibodies, showing infant's own production, while IgG anti-galactosyl antibodies were almost undetectable. At the age of 24 months the serum IgM anti-galactosyl antibodies level was comparable to those of the mothers, while IgG and IgA antibodies were still markedly decreased.

We conclude that IgG anti-galactosyl antibodies cross the placental barrier and that the own humoral immune response to the galactosyl epitope in infancy starts in isotypes IgM and IgA, probably following exposure to the gut bacterial flora expressing this epitope.

M. Sviteková (Department of Gynaecology and Obstetrics, Faculty Hospital and the Faculty of Medicine, Masaryk University, Brno): **Adnexal torsion in the third trimester of pregnancy (a case report).**

Analysis of the case of adnexal torsion in the third trimester of pregnancy

A thirty-year-old primipara showed up in 33rd week of gestation with acute pain in the right hypogastrium. The cause of acute abdominal pain was not cleared up by surgical or gynaecological examination. An explorative laparotomy was performed; despite this no pathology was found.

A new ultrasound scan was done because of the deteriorated clinical status. A cyst in the cavum Douglasi was detected and evacuation of the cyst by vaginal way was performed. The clinical status of the patient worsened again, therefore a lower-segment caesarean section and subsequent revision of the abdominal cavity was done. On the right adnexa the torsion of a paraovarial cyst was found and right-side adnexectomy was indicated. No further complications appeared in post-operative care.

The results of the analysis show that even at higher stages of pregnancy less likely causes of acute abdominal pain should be considered. Close co-operation of the gynaecologist and the surgeon is needed for their timely detection and therapy.

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This report is concerned with two cases of malaria which were imported to the Czech Republic from the area of endemic occurrence – south-eastern Africa. As neither of the patients had taken antimalarial prophylaxis before the onset of the disease, we had to do with a serious course of malaria, completing criteria of severe malaria, which needed hospitalisation at an Intensive Care Unit. In the first case the infection was a combination of *Plasmodium falciparum* and *Plasmodium malariae*. In the second case it was an aetiological agent identified as *Plasmodium falciparum*. Both patients were treated with quinine and doxycycline. The initial part of the treatment was launched parenterally. As a side effect of the treatment with quinine, transitional hypoacusis appeared, which spontaneously disappeared after termination of the treatment.

The patients were discharged to outpatient treatment after managing the acute state.

J. Radvanová, J. Kozák, H. Němcová, A. Holubová, J. Matějek (Children's Department, Hospital Třebíč): **Fever of unknown origin in pediatric age.**

Fever of unknown origin – FUO – represents a dilemma for the primary care physician, pediatric departments of hospitals, as well as for the family of the young febrile child. FUO is defined as the presence of fever over ≥ 38.5 °C documented by a health-care provider, whose cause could not be identified after one week of intelligent and intensive investigation.

In our case report we demonstrate a boy actually 8 years old, who had been investigated for FUO for more than 2 years. We describe the symptoms, clinical situation, and a complex diagnostic examination, but the diagnosis remains problematic. After two months of hospital stay in our department and in the Faculty Pediatric Hospital in Brno in 2004 with many empirical trials of antibiotics, pulse doses of corticosteroids were administered, after which the symptoms including fever transitorily disappeared. After one year the fever recurred, accompanied by a limitation of both wrist movements. The whole diagnostic process was repeated and actually the patient's diagnosis is called: Juvenile idiopathic arthritis, HLA B27 negative, systemic form.

Our case report underlines that even modern diagnostic procedures applied for a time period of more than two years are not able clearly to identify the aetiology of fever in all cases.

F. Němec (Department of Orthopaedics, Faculty Hospital, Brno): **Oswestry versus SF-36 questionnaire in patients with degenerative disease of lumbar spine.**

We can objectify difficulties of patients with the degenerative disease of the lumbar spine by many types of objective questionnaires, for instance: Oswestry and SF-36 (Short Form of Health status). Oswestry is a questionnaire which is well-arranged, simple, and targeted more to the physical aspect of troubles. There is a proportional number (expressed by percentage) indicating the level of the handicap as the outcome of an Oswestry questionnaire. There are 8 dimensions and 8 values as outcomes of SF-36. After counting over these 8 dimensions, we can get 2 values, which regard both to the physical (PCS – physical component summary) and the mental (MCS – mental component summary) side of the disease. SF-36 is more comprehensive (36 questions), targeted to general health state. It is modern and can be used not only in orthopaedics, but also in other branches.

We investigated patients indicated for a surgical treatment of the degenerative disease of the lumbar spine in terms of spinal stenosis (44 patients) and spondylolisthesis (14 patients) from October 2005 to April 2006. The average age of the patients with spinal stenosis was 61 years (men) and 59 years (women), while the patients suffering from spondylolisthesis were 47 years (men) and 49 years (women) old on average.

Thirty-five patients filled up an Oswestry as well as an SF-36 before the operation, thus they were enrolled in statistical analyses.

The patients with spinal stenosis reached an average score of 51.6 % in Oswestry and 29,7 (PCS category) and 39,6 (MCS category) in SF-36.

Patients with spondylolisthesis reached an average score of 50.4 % in Oswestry and 25.5 (PCS category) and 39.6 (MCS category) in SF-36.

We observed a statistically significant correlation between the Oswestry and the dimension VITALITY and the category PCS in SF-36 ($p<0.05$); on the other hand, no correlation could be seen between the Oswestry and the category MCS in SF-36.

According to the Oswestry and SF-36 questionnaires, patients who underwent operation showed medium infliction in both groups. The usage of the simpler Oswestry questionnaire for clinical evaluation on every single patient is sufficient and the introduction of SF-36 has no additional value.

M. Radvan, J. Štumar (Department of Internal Medicine, Hospital Třebíč**): Poisoning by anticoagulant rodenticides in clinical practice.**

As rodenticides there are actually used mostly vitamin K antagonists with prolonged biological halftime – superwarfarins. Intoxications do not occur very frequently. In more than 90 % cases they are caused by accidental ingestion in children or in adults working with rodenticides. Single exposures are usually asymptomatic, without the clinical signs of bleeding and, only in rare cases, alteration of the coagulation status. Hospitalisation is mostly not required.

On the other side, chronic exposures, mainly in psychiatric patients, could represent a clinically significant disease with bleeding from any organ system, requiring the stay on an ICU ward.

It is not always easy to identify the cause. When a patient presents with a coagulopathy, other reasons of it must be ruled out unless the history of superwarfarin ingestion is obvious. Coagulopathy can result from congenital deficiencies of coagulation factors, liver dysfunction, DIC, sepsis, thrombocytopathy, thrombocytopenia, snake envenomation, and recently mainly from indicated administration of coagulation inhibitors.

In our case report we describe a 52-year-old man hospitalised with left arm bleeding and an initial compartment syndrome. The correct diagnosis and consequent therapy (high doses of vitamin K and fresh frozen plasma were sufficient) was confirmed by positive assay finding of the anticoagulant rodenticide in the patient's blood.

J. Šťastná[1], K. Krontorádová[2] First Department of Paediatrics, Faculty Hospital and the Faculty of Medicine, Brno, [2]Department of Physiology, Faculty of Medicine, Masaryk University, Brno): **Low baroreflex sensitivity and overweight as risk factors influencing the development of hypertension in adolescents.**

Overweight and low baroreflex sensitivity are often found in adult patients suffering from high blood pressure. The aim of our study was to investigate what is the value of the Body Mass Index – (BMI) and Baroreflex Sensitivity – (BRS) in predicting the development of hypertension in adolescents. We examined 38 adolescents (group H; mean age 16.1 ± 2.4) with repeatedly diagnosed hypertension and 73 healthy controls (group C; mean age 16.5 ± 2.2). BMI was calculated and blood pressure was assessed by a non-invasive "pulse after pulse" (Finapres) method with controlled respiration (20 breaths/min) during a five-minute interval. BRS was evaluated by a spectral method. The sensitivity and specificity of BRS and BMI and their combination in the diagnosis of hypertension were assessed by evaluating their receiver-operating characteristic curves (ROC) and the area under the curve (AUC).

The significance of BRS and BMI in predicting hypertension was evaluated by logistic regression. Group H (6.8 ± 3.2) had lower BRS in comparison with group C (10.3 ± 5.7; $p<0.001$). BMI was higher in group H (23.6 ± 3.0) than in group C (21.7 ± 2.1; $p<0.001$).

The AUC values were 0.705, 0.691, and 0.788 for BRS, BMI, and both BRS and BMI, respectively.

Low BRS ($p=0.001$) and higher BMI ($p=0.0004$) were independent variables associated with increased risk of hypertension. No correlation was found between BMI and BRS in either of the groups. We found that the decrease of BRS and overweight are two independent risk factors for the developing hypertension in adolescents. Considering both BRS and BMI simultaneously showed a higher specificity and sensitivity in diagnosing hypertension in adolescents than considering each factor separately.

Compiled and revised by J. Litzman