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UNUSUAL TYPE OF ICHTYOSIS IN CHILD – A CASE REPORT

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A 17-month-old Gipsy boy was reffered for evaluation of multiple lesions on his neck, lateral sites of the trunck and flexural parts of the limbs. The lesion appeared at age 3 months as hyperpigmentated hyperkeratotic plaques, but the skin disease started on the second day after delivery as several vesicles on the body. Except positive antibodies against cow milk and eosinophilia there were no other laboratory or clinical findings.
The skin biopsy specimen showed epidermolytic keratosis. Epidermolytic hyperkeratosis is an unusual type of ichthyosis. This inherited keratinization disorder is characterized clinically by erythema, blistering, and peeling shortly after birth. It may resolve and be replaced with thick scaling. It can lead to life-threatening complications, such as sepsis. Histologically, there is a hyperkeratosis and vacuolar degeneration. Genetically, this is an autosomal dominant disease with complete penetrance; however, 50% are spontaneous mutations. The clinical phenotype is a result of alterations in the gene(s) for keratin 1 and/or 10. The child is treated with topical keratolytic agents. His condition is stabile.

ERBIUM: YAG LASER TREATMENT OF PENILE PEARLY PAPULES

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Objective: Pearly penile papules (PPP) are angiofibromas, occurring circumferentially over the corona and sulcus of the penis. They occur most frequently in the second and third decades. This condition is benign, noninfectious and asymptomatic. PPP need to be differentiated from condylomata acuminata, lichen nitidus, molluscum contagiosum and ectopic sebaceous glands. Removal of PPP is often requested for cosmetic reasons. Numerous therapeutic modalities, such as podophyllin, electrodessication, curretage, cryotherapy and CO_2 laser have been utilized.
Methods: We treated 45 individuals with 2,94 mm Erbium:YAG laser in ablation mode (fluence up to 4 J/cm^2). 7 of them have been previously treated as condylomata acuminata. A topical anesthesia with 5% lidocaine and prilocaine cream was applicated prior the procedure. If residual lesions persisted, the treatment was repeated after 1 month. Antimicrobial ointments were used to cover the postoperatory wounds.
Results: PPP were removed in all patients in 2,4 sessions. The procedure was very well tollerated by all patients. The process of reepithelization durated from 10 to 14 days. No scarring occurred after the treatment.
Conclusions: PPP are benign angiofibromas. Its resemblance to condylomata acuminata may cause anxiety and may lead to hazardous treatments, frequently associated with post-treatment complications such as scarring. Even after reassurance, some patients will ask for the lesions to be removed. Because of high coefficient for absorption of water, Er:YAG laser ablation is performed with minimal thermal injury to the treated tissue and enables a scar-free reparatory process.

PHOTOTHERAPY OF PSORIASIS IN CZECH REPUBLIC

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Objective: Phototherapy belongs to standard dermatologic treatments for psoriasis and it is considered to be a part of systemic antipsoriatic therapy. With new investigations and technical development of devices, phototherapy is an effective and relative safe treatment with a good

cost/benefit ratio. The aim of our survey was to find out the state of phototherapy in Czech Republic.
Methods: We used a structured questionnaire with cross check answers that was sent to all dermatologic departments per post, electronic post or personal delivery. The answers were then evaluated in percentual figures.
Results: At the time of abstract submission the survey is still ongoing. The exact data will be presented at the time of ICD congress 2009 in Prague. Preliminary results show that all dermatologic in-patient departments carry out phototherapy also for out-patients, there is also a sufficient number of dermatologic offices offering phototherapy only for out-patients. The equipment with UV devices is satisfactory and up-to-date, with narrow band UVB and photochemotherapy PUVA been mostly used. The capacity for further patients is still available. The average frequency of phototherapy is 4 sessions a week, the average number of procedures is 30 and the duration of session (incl. necessities before and after irradiation) takes in average less than 20 minutes. Some drawbacks are the personal, space and technical requirements with their financial consequences for the dermatologists and the required time and sometimes complicated accessibility for patients.
Conclusions: Phototherapy of psoriasis in Czech Republic represents an available and frequently used therapy for psoriasis that enables further utilization. Although relative time consuming, phototherapy is comfortable for patients and that correlates with their good compliance. Even in the era of biologics, phototherapy is an important therapeutical modality.

CONTACT HYPERSENSITIVITY TO ADJUVANT SUBSTANCES OF PHARMACEUTICAL AND COSMETIC PREPARATIONS

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Objective: The study was aimed at determining the frequency of sensitisation to 29 selected adjuvant substances (preservatives, antioxidants and emulsifiers) of pharmaceutical and cosmetic preparations in cohorts of men and women with chronic eczemas and at determining statistically significant differences in sensitisation among the cohorts using a binomial test.
Methods: The cohort consisted of 687 men (Ø age 44.5) and 1531 women (Ø age 44.3) examined during the years 2001-2007. Contact allergens of Chemotechnique Diagnostic AB company and Curatest patch strips of Lohmann&Rauscher company were used for the testing. The period of patch test application was 48 hours; reactions were evaluated in 48, 72 and 96 hours according to ICDRG rules.
Results: The per cent values of sensitisation frequencies for individual allergens in men/women cohorts were as follows: Parabenes-mix 1.2/1.1, Formaldehyde 3.2/2.0, Bronopol 1.5/1.9, Imidazolidinylurea 0.3/0.8, Diazolidinylurea 0.7/0.9, DMDM-hydantoin 0.4/0.4, Quaternium-15 0.7/0.7, Kathon CG 0.7/1.9, Thiomersal 10.0/11.5, Phenyl mercury acetate 2.3/2.8, Benzalkonium chloride 0.7/1.0, Chlorhexidine digluconate 1.6/1.2, Phenoxyethanol 0.1/0.3, Dibromodicyanobutane/Phenoxyethanol (1:4) 0.7/1.8, Chloracetamide 1.9/1.2, Chlorocresol 0.0/0.3, Sorbic acid 0.3/0.2, Triclosan 0.6/0.4, Glutaraldehyde 0.3/0.5, Dichlorophen 0.4/0.3, Chloroquinaldol 0.1/0.3, Dodecyl gallate 2.9/1.2, Butylated hydroxyanisole 0.0/0.7, Propyl gallate 0.1/0.4, Butylated hydroxytoluene 0.3/0.0, Alcoholes adipis lanae 3.5/3.7, Cocamidopropyl betaine 0.4/0.3, Triethanolamine 0.9/0.3, Propylene glycol 0.3/0.1. No statistically significant difference was found between the men and women cohorts when comparing the percentage ratios of sensitisation to adjuvants.
Conclusions: Sensitisation to adjuvant substances may result in chronic progress of eczemas.
Supported by a grant project IGA MZ ČR NR 9203-3/2007.

DERMATITIS HERPETIFORMIS DUHRING

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Objective: Dermatitis herpetiformis (DH) is an autoimmune blistering disorder. There is an important association with gluten-sensitive enteropathy. Prevalence has been reported up to 10 cases per 1,000,000 population. The onset of DH starts from the second to fourth decade of life. The diagnosis of DH is based on the clinical features and on the immunofluorescence findings in the skin biopsy.
Antigliadin antibodies are a poor marker for celiac disease. These antibodies are produced in response to gliadin and other related prolamins found in wheat. Antigliadin antibodies are also found in non-enteropathic patients.
Antiendomysial antibodies (AEA) and antireticulin antibodies (ARA) are found in patients with dermatitis herpetiformis. Antibodies against tissue transglutaminase (ATA) are detected in about 80% of patients with dermatitis herpetiformis and in almost 100% of patients with celiac disease.
Methods: Antibodies against gliadin and tissue transglutaminase were detected using ELISA method. The other antibodies (antiendomysial and antireticulin antibodies) were detected by indirect immunofluorescence.
Results: We present our immunofluorescence findings in the skin of patients with suspected DH and the results of detection of antibodies mentioned above in patients with DH and celiac disease in the year 2008.
Conclusions: The laboratory blood tests are important.

The typical clinical cases can be easily distinguished. The characteristic distribution of the eruption is present. Some special tests are necessary to determine unusual cases – the detection of antibodies against gliadin, reticulin, endomysium and tissue transglutaminase.

IMMUNOLOGICAL CHANGES IN THE PSORIATIC LESIONS

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Objective: Immunological changes include an increase of T-lymphocytes, positive reaction to rheumatic factor and C-reactive protein, change in number of B-lymphocytes, production of immunoglobulins and immune complexes. Immunological changes found in psoriatic lesions – hyperproliferation of keratinocytes activity of polymorphonuclear leukocytes in acute phase and infiltration of T-lymphocytes in chronic phase. These reactions may be accompanied with humoral immunological changes.

Methods: We indicated an immunohistological examination in 56 patients aged 2 to 74 years with a histologically confirmed psoriasis.

Results: We found in the stratum corneum a focal deposits of immunocomplexes (IC), more often with IgG, less with IgA antibodies and C3 component of complement. We found out IC with IgM and IgG antibodies and fibrin in the vessel walls.

Conclusions: In our opinion the detection of IC in psoriatic lesions together with changes of immunity in peripheral blood enables to place psoriasis to autoimmune diseases and it will be valuable after the identification of autoantigens.

THE CYTOKINE GENE POLYMORPHISMS IN PEMPHIGUS VULGARIS PATIENTS IN THE SLOVAK POPULATION

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Objective: Cytokines participate in the induction of antibody production as well as maintenance and regulation of immune responses to pemphigus vulgaris-related autoantigens. The functional polymorphisms in cytokine genes are therefore among potential candidates participating in susceptibility to PV.

Methods: The study comprised 33 PV cases and 140 unrelated healthy subjects. Cytokine genotyping was carried out by polymerase chain reaction with sequence-specific primers using a commercial kit. Polymorphisms in following 13 cytokine genes were investigated: IL-1, IL-1, IL-1R, IL-1RA, IL-4R, IL-12, IFN-, TGF-1, TNF-, IL-2, IL-4, IL-6 and IL-10. Their association with the disease was assesed with Fisher's exact test.

Results: A weak disease association was found with TNF--308 G/A and IL-10 -1082 G/A, -819 T/C and -592 A/C gene polymorphisms only. The analyses revealed slightly increased frequencies of TNF-α -308 G allele (95.45% vs. 86.79%; P = 0.053), -308 G/-238 G haplotype (93.94% vs. 82.86%; P = 0.022) and IL-10 -1082 A/-819 C/-592 C haplotype (45.45% vs. 30.00%, P = 0.019) in PV patients; however, the significance dissapeared after correction for multiple testing.

Conclusions: Our results suggest that variations in the TNF-α and IL-10 promoter regions could contribute to the development of PV but their overall impact would be rather limited. Our finding of increased frequency of low-producer TNF-α allele and haplotype among PV patients seems to be in conflict with the role of TNF-α in the induction of acantholysis. We explain this discrepancy by the existence of strong linkage disequilibrium between high-producer TNF α-308 A allele and protective HLADRB1* 0301 allele, which is rare in patients with PV. The observation of increased frequency of lowproducer IL-10 ACC haplotype in PV patients is in line with believed protective role of IL-10 in acantholytic process and indicates a role of IL-10 gene promoter polymorphisms in the susceptibility to PV.

LASER BRACKETS DEBONDING USING INFRARED LASER RADIATIONS

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Objective: In some last years the esthetics is an important factor for patients seeking an orthodontic treatment. Our study demonstrates the possibility of using laser radiation for ceramic bracket removing. Three laser radiations were examined for this effect, and the removing possibility and velocity together with enamel and pulp damage were investigated.

Methods: As radiation sources, three continuously running laser systems were used: diode pumped Tm:YAP microchip laser generating wavelength of 1.99 mm, diode

pumped Nd:YAG laser with 1.44 mm wavelength, and GaAs diode with 0.808 mm.
Ten human premolars of adolescent patients (age 11 to 15), extracted for orthodontic reasons, were used in the study. To identify the temperature rise by a thermocouple, a hole was prepared inside the tooth opposite the bracket. The bracket with the tooth sample was heated by the laser light and after the chosen time interval the bracket was removed mechanically from the tooth surface.
The measurement of transmission and absorption of the basic element – bracket, adhesive resin, and enamel – was also made with the goal to explain the source of heat and bracket debonding.
Results: The irradiation by the GaAs diode (0.808 mm) does not help for brackets removing. When Tm:YAP radiation was used, the heat was concentrated inside the bracket and adhesive resin, and after 60 s the bracket could be removed. Similar results have been obtained for the Nd:YAG laser (1.44 m), only the increase of temperature without and with cooling was more significant.
Conclusions: The ceramic brackets debonding by the three various laser radiations were investigated. From the experiments performed it follows that continuously running lasers – the 1.99 m Tm:YAP and 1.44 mm Nd:YAG with the power 1W acting for 60 s providing a reasonable dose for brackets tear off. From the SEM measurement results, the minimum damage of enamel for this case was found.

OCCUPATIONAL ALLERGIC CONTACT DERMATITIS FROM EPOXY RESINS

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Objective: Epoxy resins (ERs) are used widely in manufacturing electrical equipment for enclosing transformers, condensers, in paints for surface coating and in other industries for adhesive purposes. Most of the health hazards from ERs (epoxy monomer, hardener, reactive diluent and other additives) occur in the occupational setting during the production of ERs or during the manipulation of the finished epoxy product. Approximately 60–80% of patients with allergic contact dermatitis to ERs are sensitized to diglycidyl ether of bisfenol A, which is in standard patch test series.
Methods: Between October 2007 to October 2008 patients with suspicion on contact allergic dermatitis were investigated. Patch tests were carried out on 338 patients (109 males, 229 females) with The European Baseline Series in which bisphenol A 1% in petrolatum was contained. The first test reading was done 30 min after the patch test strips were removed and further reading at day 3 and day 4.
Results: Positive patch test reactions to bisphenol A were obtained by 15 (4,4%) of patch-tested patients, by 2 females (1%) and by 13 males (11,9%). All of 15 cases of contact allergic dermatitis to epoxy resins were occupational source. The location of the epoxy resin dermatitis were exposed sites, including hands, forearms, face, neck and lower legs.
Conclusions: Epoxy resins are one of the most frequent causes of occupational allergic contact dermatitis. Approximately 60–80% of patients with allergic contact dermatitis to ERs are sensitized to diglycidyl ether of bisfenol A, but negative reaction to bisphenol A does not rule out epoxy resin dermatitis, because it could be due to hardener, reactive diluent and other additives too.

STROMAL FIBROBLASTS FROM BENIGN FIBROUS HISTIOCYTOMA INFLUENCE NORMAL HUMAN KERATINOCYTES IN VITRO

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Objective: Evaluation of influence of benign and malignant fibrous histiocytoma stromal fibroblasts on the phenotype of normal human keratinocytes *in vitro*.
Methods: Isolation of stromal fibroblasts from both tumour types, their FACS and immunocytochemical analysis and their co-cultivation with normal human keratinocytes was performed. Phenotype of these keratinocytes was analysed with special regard on their proliferation and differentiation status and signs of epithelial mesenchymal transition (CK 8, 19, vimentin, nucleostemin, Ki-67 and galectin-1).
Results: Keratinocytes co-cultivated with benign fibrous histiocytoma fibroblasts exhibit significant CK 19 expression in contrast to fibroblasts prepared from malignant tumor. No epithelial-mesenchymal transition was observed when both types of fibroblasts were employed.
Conclusions: Epithelial hyperplasia characteristic for benign fibrous histiocytoma might be triggered by stromal fibroblasts.

SYPHILIS IN PRAGUE AT THE BEGINNING OF THE 21ST CENTURY

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Objective: To evaluate the clinical, epidemiological, socioeconomic and behavioral characteristics of syphilis patients between 1999 and 2005 at the two Departments of Dermatovenereology of the Charles University in Prague.
Methods: Syphilis cases were diagnosed based on clinical features, the serological picture, and dark-field microscopy. The anonymous questionnaires focused on HIV risk were included.
Results: During the 7-year period, a total of 675 syphilis patients were diagnosed and treated. Symptomatic syphilis was diagnosed in 117 men (17,3%) and in 50 women (11.9%). 70 patients (10.4%) presented with genital chancre, 4 (0.6%) with extragenital chancre, 63 (9.4%) with macular or papular rash and 20 (3.0%) with condylomata lata. Of the 421 women, 205 (48.7%) were pregnant. 67(16.0%) were pregnant at the time of syphilis diagnoses and 138 (32.8%) underwent repeated protective treatment during pregnancy. Foreigners accounted for 24.1% of all patients; 13.7% came from the countries of the former Soviet Union.
Conclusions: The number od reported syphilis cases was increasing from 1989 to 2001, after 2001 it decreases gradually. Syphilis incidence in Czech Republic is lower than in the states of the former USSR, but higher than in western countries in Europe. The migration of foreigners from Eastern Europe and Asia is likely to continue influencing the incidence of syphilis in the Czech Republic. According to our data symptomatic syphilis was seen more often in man, due to the fact, that about half of women were protectively treated during pregnancy. Public health strategies aimed at syphilis prevention including an early identification of infected individuals, adequate treatment, partner notification and treatment of infected partners, elimination of high risk behaviour, and promotion of accessibility and use of health care services with testing other STI including HIV.

SOLID STATE MID-INFRARED LASERS FOR LITHOTRIPSY

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Objective: The contemporary medicine leads towards the minimally-invasive diagnosis and treatment methods. Laser-assisted lithotripsy is a minimally-invasive method for destroying or disruption of human urinary stones. The aim of the presented study was to compare *in vitro* the ablation or perforation effect of Ho:YAG and Er:YAG laser radiations tested on the artificial samples made from compressed plaster which serve as human urinary stones model.
Methods: The interaction samples were stored in water at room temperature (25°C) and the laser radiation was delivered to the interaction place by the COP/Ag hollow glass waveguide terminated with cap (in case of laboratory Ho:YAG laser and laboratory Er:YAG laser) or by the fibre (in case of clinical Ho:YAG laser). The interaction was carried out in contact regime. We have evaluated the ablation effect for various laser pulse energy and various number of pulses. From the obtained experimental data we have analyzed the perforation rates for both investigated laser radiations. Experimental evaluation of laser radiation (Ho:YAG or Er:YAG) interaction with artificial samples (compressed plaster) used as simulator of the real human urinary stones was performed *in vitro*.
Results: For clinical Ho:YAG laser, laboratory Ho:YAG laser and laboratory Er:YAG laser the perforation rates of compressed plaster were evaluated and compared. All lasers operated in different energy or power levels.
Conclusions: From the results it can be evaluated that Er:YAG laser radiation is comparable with Ho:YAG laser in artificial stone samples perforation efficiency. Er:YAG laser radiation is preferable for precise tissue cutting and ablation due to its absorption efficiency in tissue with high content of water. Therefore the Er:YAG laser is a good candidate for urology treatments (including laser-assisted lithotripsy) in comparison with Ho:YAG laser, which is now "gold standard" in clinical urology.

THE PREVALENCE OF NON-MELANOMA SKIN CANCER IN RENAL TRANSPLANT RECIPIENTS OBSERVED IN TRANSPLANT CENTER

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Objective: In the last 20 years it has significantly increased the number of patients after solid organ trans-

plantation. Patient survival have increased as a result of better immunosuppressive regimens, currently the half life for kidney grafts has nearly doubled. The dark side of a long-term immunosuppressive therapy is an increase prevalence of skin cancer, mainly non-melanoma skin cancer, which is 100-250 more frequent compared with general population. The aim of our study was to find out the prevalence of non-melanoma skin cancer in renal transplant recipient and following the sun-protective attitudes.
Methods: 160 patients after kidney transplantation from 21-72 years were examined prospectively by cutaneus examination, dermoscopy and by questionnary about sun protective behaviours (sun protective clothing, using suncreens and avoiding the sun exposure).
Results: In 14% examined patients (23/160) non-melanoma skin cancer has been present. From those, 15/23 were solitary (6 patients) or multiple (9 patients) actinic keratoses (AK). In 2/23 patients basal cell carcinoma (BCC) in combination with actinic keratoses, 2/23 solitary basal cell carcinoma has been detected and 4/23 squamous cell carcinoma (SCC) combinated with multiple AK has been detected. In positive group for presence of NMSC 11/23 patients were treated by combination consisting of ciclosporine A, mycophenolate mofetil and prednisolone, 6/23 by tacrolimus, mycophenolate mofetil and prednisolone, 3/23 by ciclosporine A and prednisolone and 3/23 azathioprine, ciclosporine A and prednisolone. Despite of the fact, that nearly 90%(143/160) have been informed about sun protection, only 5/160 used strictly photoprotective regimen.
Conclusions: Immunosuppressive regimen in kidney transplant recipient significantly increase the rates of non-melanoma skin cancer. Intensive education, strict prevention, follow-up strategy and early diagnosis with suitable therapy can decrease morbidity and mortality of organ transplant recipients.

DIAGNOSTICS OF ERYTHEMA MIGRANS – EARLY SKIN FORM OF LYME BORRELIOSIS BY NESTED PCR

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Objective: Due to the frequent lack of serologic positivity, the diagnostic of erythema migrans (EM) is predominately based on the clinical findings. The proof of specific DNA can provide better results under some circumstances. A sensitivity and specificity of the newly-designed targets were tested in nested PCR.
Methods: 48 patients with EM diagnosed by a dermatologist were tested for the presence of the specific DNA in plasma and urine. The samples were taken before and after antibiotic treatment and late after 3 and 6 months. Nested PCR was performed by five sets of primers in parallel – targeted at 16S rDNA, flagellin, p66 protein, OspA and OspC proteins.
Results: Before treatment the DNA positivity was found in 26 patients (54,2%): 8 times in plasma, 12 times in urine and 6 in both of the media. At the end of treatment the overall positivity 6% was made up (6 positive patients in plasma, 8 in urine, 2 in both of the fluids). Specific antibodies were ascertained in in 9 patients (18,3%). After 3 moths 7 samples remained positive, after 6 months all of them were negative. Target sequences with the highest sensitivity were following: OspA (plasma 31,6%; urine 36,4%), 16SrDNA (plasma 36,8; 45,5%), flagellin (plasma 15,8%; urine 13,6%), OspC (plasma 15,8%, urine 4,5%).
Conclusions: Laboratory diagnostic of EM made on the DNA positivity had substantially higher sensitivity comparing with the proof of the specific antibodies. PCR was capable to detect DNA in plasma and in urine too whereas the sensitivity in urine was slightly higher in all of the tested primers. In spite of the fact that examination of DNA in urine in borreliosis is doubted in some experiences these results show that a good balanced method is able to provide deserving results. The arrangement of PCR being used in our study is too expensive to use it in a clinical practice, but picking up the two best reactive systems can provide the practically utilizable results too.
Study was supported by grants IGA NR/8293 and MSM 0021620812.

TINEA CAPITIS IN 22-MONTH-OLD BOY (CASE REPORT)

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Tinea capitis is an uncommon disease in small children especially in infants and toddlers. The authors present a family case, in which the mother and her two children were affected. The mother and the sister of our patient had tinea corporis form and they were treated successfully with local antimycotics. *Microsporum canis* was found as the etiological agent.
Our otherwise healthy boy had the manifestation only in his scalp. Local therapy was ineffective, the systemic treatment with terbinafin was started (blood account and basic biochemistry were normal). After six weeks of this therapy local improvement was observed and the therapy was terminated. Mycology showed *Microsporum canis* again. The following therapy was consulted with specialists (Mycology diseases specialist and Centre for treatment of infectious diseases). The treatment with itraconazol was

started. After another 6 weeks of systemic therapy the local finding and the mycology normalized.
The aim of this presentation is to point out the importance of repeated mycological examinations during the treatment.

PHARMACOECONOMY OF POSTTHROMBOTIC VENOUS LEG ULCERS

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Objective: The early diagnosis of the inherited thrombophilic status resulting in repeated thromboses, repeated leg ulcers reduces the costs of treatment.
Methods: 86 patients with leg ulcers were examined – 37 men and 49 women. DNA analysis by polymerase chain reaction /PCR/ confirmed the inherited thrombophilic status – mutation of Leiden, prothrombin gene mutation and mutation of methylenetetrahydrofolate reductase gene in heterozygous and also in homozygous form.
Results: Mutation of Leiden was confirmed in 12,8% of patients, p=0,127, prothrombin gene mutation was confirmed in 7% of patients, p=0,069, mutation of methylenetetrahydrofolate reductase gene was detected in 58,2% of patients, p=0,58. DNA analysis for all these mutations costs about 2304 crowns for one patient. The inherited thrombophilic status resulting in leg ulcers is treated by anticoagulants. Leg ulcers with decelerated healing are treated according to phases of healing by enzymes, by means of autolytic debridement, chemical debridement, by means of wet healing of wounds. The prices of these means of healing of leg ulcers are high.
Conclusions: This study confirmed that the early diagnosis of the inherited thrombophilic status resulting in leg ulcers reduces the costs of treatment.

CARCINOMA OF THE PENIS
(CASE REPORT)

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Squamous cell carcinoma (SCC) of the skin is the second commonest cutaneous malignancy. The etiology of SCC is multifactorial; the most important factor is UVB radiation on sun-exposed surfaces of the body. One of the important sites of cutaneous SCC include the external genitalia and perianal region. Anogenital SCC appears to be HPV associated, especially with oncogenic strains such as 16 or 18. Most commonly cutaneous SCC presents as an indurated, slow growing tumour, which is often painless and may be nodular, ulcerated, plaque-like or verrucous. SCC of the penis, scrotum and anus are associated with high risk of metastases. The differential diagnosis includes infectious and noninfectious inflammatory diseases and other tumours as basalioma, melanoma, lymphoma and metastases. We present four patients who had been treated as balanitis and non-specific ulcer of penis before the diagnosis of SCC was established. One 33 year old patient died of the symptoms of generalization. Other three patients submitted to partial or total penis amputation followed by regional lymphadenectomy and do not suffer from major health problems. In conclusion, anogenital SCC is a tumour with serious prognosis. Carcinoma of the penis should be taken into account especially in patients with a long-lasting history of penile lesions of different clinical appearance.

A NEW LIPOSOMAL PRODUCT CONTAINING PHTHALOCYANINE FOR TOPICAL APPLICATION OF MALIGNANT TUMOUR PDT

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Objective: Basic preclinical studies were carried out with a newly prepared liposomal product comprising hydrophobic phthalocyanine as its active ingredient. The newly prepared liposomal product for the photosensitizer topical application needs the time interval („drug-to light time interval") of 10 min only – in contrast to the commercial product METVIX®, in which the drug-to-light time interval takes 2 hrs.
Methods: The product anti-cancer effect was tested in nude mice with growing human tumours as follows: mammary carcinoma (line MDA-MB-231), PE/CA-PJ34 basaloma (clone C12), HCT-116 colon carcinoma and amelanotic melanoma (line C-32). The new product containing phthalocyanine was locally spread onto the surface of the tumour region (area of about 2 cm^2; 4 mg phthalocyanine per 1 g of the product; 0,2 g of the product applied onto the area of 2 cm^2). Ten min after that, the area was exposed to radiation from a xenon lamp (lamp type ONL 051, wave length 600-700 nm, total energy 80 J/cm^2).
Results: In most mice, the tumour completely disappeared, which was supported by histology on the 40th day after the PDT.
Conclusions: We conclude that the hydrophobic photosensitizer with hydroxyl-aluminum phthalocyanine and its liposomal gel formulation offer optimum characteristics enabling wide ranging use of topical PDT for numerous cancer indications.

CLINICAL AND FUNCTIONAL INVESTIGATIONS OF LOWER LIMBS VENOUS SYSTEM DISEASE AND THEIR CORRELATION

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Objective: In the group of 50 patients with CVD symptoms at both lower limbs, who visited the ambulance of phlebology in the years 2004-2006, a clinical finding evaluation according to CEAP classification was performed and there was carried out the investigation of the lower limbs venous system via digital photoplethysmography and ultrasound detection. Results comparison was performed according to CEAP at 100 lower limbs with clinical symptoms C1-C6.
Methods:
1. CEAP classification
2. D-PPG investigation
3. Doppler ultrasonography

Results: Resultant kappa coefficient value 0.344 corresponds with low conformity measure when comparing CVD symptoms classification results in the class C and D-PPG results. It might be said that D-PPG investigation results do not depend on CVD changes clinical picture and does not practically correlate with CEAP classification. Kappa coefficient value 0.522 corresponds with and average conformity when comparing investigation results according to C class of CEAP classification and ultrasound examination results. Comparison of D-PPG investigation results and the ultrasound examination results with kappa coefficient value 0.552 also corresponds with the average conformity measure. Kappa coefficient value is already significantly higher in these comparisons, however, it is necessary to be aware that there are still cases, in which D-PPG and ultrasound examinations do not conform in venous system infliction's seriousness.
Conclusions: As well, the determination of reliability, sensitivity and specificity intervals and the overall accuracy of D-PPG and CEAP classification investigation results in relation to DUS, did not proved sufficient reliability of these investigations, which can not be recommended as first choice examinations at the diagnosis of lower limbs venous system diseases and they can serve as supplementary examinations only.

PHOTODYNAMIC THERAPY OF HUMAN COLORECTAL CARCINOMA CELL LINE

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Objective: Photodynamic therapy has been developed in recent years as a new modality for the treatment of various pathologies. The method is based on the phenomenon involving the combination of photosensitizer and light. The antitumour effects result from direct cell damage, destruction of tumor vasculature and activation of a nonspecific immune response. The more accepted use of PDT is still restricted for ophthalmology, dermatology and some form of cancer. In our experiment, the effect of phototherapy with disulfonated hydroxyaluminium phthalocyanine and photofrin (control group) on the growth of colorectal carcinoma was studied. We chose colorectal carcinoma, because the Czech population has the highest incidence and it is still increasing. We try to offer a new possibility of treatment for patients with this severe disease.
Methods: In our study, we decided to demonstrate efficacy of PDT with phthalocyanine for treatment of colorectal carcinoma. Athymic mice with a human colorectal carcinoma subcutaneously implanted to the abdominal flank were divided into 4 groups. The first group received disulfonated hydroxyaluminium phthalocyanine, the second group received photofrin and the other two groups were control ones. The first group with phthalocyanine and the second group with photofrin were illuminated by xenon lamp (600-700 nm). The third group was only irradiated and the last one did not receive any photosensitizer or irradiation.
Results: In our study, we have shown that PDT with phthalocyanine resulted in tumor remission after a single cycle of therapy in 87%. Administration of photofrin led to tumor remission in 62%. In control groups no necroses were observed and rapid spread of tumor was confirmed.
Conclusions: There is still an increasing interest and research effort focusing on developing new photosensitizers, exploring PDT mechanisms, and evaluating potential clinical indications. We proved efficacy of PDT with phthalocyanine for treatment of colorectal carcinoma. The main advantages of PDT are: no need of anesthesia, no blood loss and minimal postoperative pain.

THE MANAGEMENT OF THE RESISTANT FORM OF PEMPHIGUS VULGARIS (CASE REPORT)

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Pemphigus vulgaris (PV) is a severe autoimmune disease. In its etiopathogenesis play a key role IgG antibodies which bind to desmosomal proteins. The pemfigus antibodies reduce intercellular adherence and cause intraepidermal blistering. Clinical picture is characterized by large flaccid blisters and non-healing erosions on the skin and mucous membranes. Before the introduction of corticosteroids the mortality of PV was 75% on average. Systemic

corticosteroids are the best established therapy for the management of PV. In the treatment of a resistant cases a number of adjuvant drugs and alternative therapeutics regimens are used.

We describe a 51-year old women with severe form of PV resistant to standard therapy. Initially, the high doses of systemic corticosteroids were administered and a complete remission of the disease occurred. Daily maintenance dose of corticosteroids (prednisolone 5-10mg) were effective in next six months. Then relaps of PV occurred with generalized involvement of the skin and mucous membranes. The administration of prednisolone in daily dose 120mg was uneffective, therefore we chose combination of prednisolone and azathioprine (200mg/day). A mild improvement followed this therapeutic regimen and we slowly reduced dose of systemic corticosteroids due to developement of side effects of steroid therapy. A rapid worsening of the disease with weight loss, weakness and developement of a new painful skin and mucous membrane lesions occurred two weeks later. We recommended a pulsed intravenous cyclophosphamide with methylprednisolone (three daily doses of methyprednisolone 1000 mg, single dose of cyclophosphamide 500mg) with very good effect. Another pulse (three daily doses of methylprednisolone 500mg, single dose of cyclophosphamide 500mg) we administered one months later, between pulses we recommended oral methylprednisolone 16mg daily. A complete remission of the disease followed second pulse and persists for another six months up to now.

CETUXIMAB-INDUCED CUTANEOUS TOXICITY

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Objective: Novel antineoplastic therapies are being increasingly utilized by oncologists for the treatment of tumours in which standard chemotherapy cannot be tolerated or has failed. They target specific molecular pathways affecting cancer development. These signal transduction pathways may not only be overexpressed in tumours, but are also expressed in the skin which leads to cutaneous adverse reactions frequently observed in treated individuals. Epidermal growth factor receptor (EGFR) inhibitors belong to agents that are recently used in advanced cases of certain malignancies.

Methods: The authors report a series of 24 patients (12 patients with head and neck cancer and 12 patients with colorectal cancer) treated with cetuximab.

Results: The most frequent side effect reported in this series was pustular or maculopapular follicular eruption, often referred to as acneiform rash, which developed in 22 patients. Patients with head and neck cancer had a combination therapy with radiotherapy and experienced more severe radiation dermatitis accompanied by skin xerosis. Anaphylactic reaction was observed in three patients.

Conclusions: The spectrum of cutaneous side effects in EGFR inhibitor-treated patients is discussed with a focus on their etiopathogenesis, management as well as the relation to patientsę response to antitumour therapy.

SWEET SYNDROME AS IDIOPATHIC AND PARANEOPLASTIC DISORDER. SLOVAK EXPERIENCE

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Objective: Sweet's syndrome (SS) or acute febrile neutrophilic dermatosis is a rare disorder of unknown origin chracterized by sudden onset of fever and malaise accompanied by erythematous, sometimes bullous tender plaques and nodules. Neutrophilia is typical laboratory finding. Histological picture show a dense perivascular neutrophilic dermal infiltrate and infrequently bullae with no evidence of vasculitis. Associated conditions include infections, malignancies, especially acute myelogenous leukemia, inflammatory bowel diseases, autoimmune disorders, drugs and pregnancy.

Methods: Retrospective analysis od 11 patients with SS 2000 – 2008.

Results: Authors present retrospective analysis of eleven cases of SS six of them idiopatic and five paraneoplastic. 5/11 demonstrate EEM-like vesiculobullous pattern, 5/11 had the character of papules or plaques and 1/11 was ulcerated. Associated malignancies were 2x chronic lymphoid leukemia, 1x myelodysplastic syndrome, 1x squamous cell carcinoma and 1x colorectal carcinoma. 3/6 idiopathic cases had signes of pharyngitis, no specific bacterial/viral agent have been detected. Chronic form of salmonelosis has been diagnosed in one patient. Most frequent laboratory finding were leukocytosis (11/11), elevated ESR (11/11) and CRP (10/11). 4/11 patients had arthralgia. All patients respond well to intravenous pulse glucocorticoids with subsequent switch to consequently decreasing oral intake. No recurrence has occurred.

Conclusions: Possible pathogenetic relations are discussed. SS is rare, sometimes misdiagnosed disease. Searching for malignancies seems to be important with respect to relatively high proportion oncology disorders in this group of patients. Authors propose the examination panel as follows: Blood count, ESR, CRP, biopsy, anti-nuclear factor, systemic autoantibodies, bacterial examination (salmonela, yersinia, toxoplasma, mycobacteria), virology (HIV, CMV, HBsAg, HCV), focal infections and oncomarkers.