
The objective of this study was to evaluate the moisturizing and plasticising effects of two emulsions (Eucerin cream and lotion) on the volar forearm skin after single application. A total of 20 healthy women aged 26-56 years were studied. Epidermal hydration was determined using skin capacitance meter (Corneometer) before and after 10, 30, 60, 90, and 120 minutes. Mechanical properties of the skin were evaluated using non-invasive suction device (Cutometer) equipped with 2-mm diameter probe. Measurements were made before the application and 60, and 120 minutes later. Both emulsions increased immediately and steadily the skin capacitance values (+32% and +35%, respectively). A significant increase in all skin mechanical parameters was observed, too. Viscoelasticity (Uv/Ue) was the most sensitive parameter. These results confirm the favorable effect on the skin of both tested emulsions.


The aim of this study was to evaluate and compare the therapeutic effectiveness of four antidandruff shampoos, applied twice weekly for 4 weeks, using clinical assessment, measurement of skin lipids and mycological investigation. A total of 44 volunteers with seborrhoeic dermatitis of the scalp, divided into four groups, were studied. Significant improvement of the severity of scalp oiliness, scaling and itching as well as negative cultures for Pityrosporum ovale were observed in all patients. After treatment, patients with normal initial scalp lipid level (40-100 µg/cm²) showed increased values, whereas patients with higher initial scalp lipid level (over 100 µg/cm²) did not show any significant changes. Shampoos which contain 1% selenium sulphide and 1% zinc pyrithione showed no significant better clinical effectiveness. Shampoo which contains 0.6% ketoconazole plus 1% metronidazole plus 3% sulfur most influenced scalp lipid levels - increased values up to the 148 %. Seborrhoeic dermatitis of the scalp can be successfully treated with shampoos containing different active substances. In patients with dry seborrhoea an increase in scalp lipid level occurs due to the elimination of follicular occlusion and improvement of sebum delivery.


The aim of this study was to establish the appearance and frequency of nail changes in psoriasis vulgaris. 50 in-patients of the Department of Dermatology at the Medical University of Plovdiv (40 men and 10 women, age range between 27 and 82 years, disease duration between 2 months and 35 years and PASI score between 2.4 and 55.0) were analyzed. 41 (82%) suffered from plaque psoriasis, 5 (10%) from psoriatic erythroderma and 4 (8%) from psoriatic arthritis.
Nail changes were established in 38 (76%) patients. In 3 (7.9%) patients they preceded psoriasis, in 7 (18.4%) they appeared simultaneously with disease and in 18 (47.4%) they appeared after disease beginning. In 10 (26.3%) patients this relationship was not defined. The average duration of nail changes was 4.5 years. In 31 (82%) patients finger and toenails were affected, in 3 (8%) only fingernails and in 4 (10%) only toenails were affected. The all-20 nails were affected in 14 (37%) patients. The following nail changes were observed: oil spots (63.1%), onycholysis (63.1%), pitting (60.5%), subungual hyperkeratosis (60.5%), lack of eponychium (55.2%), thickening of nail plate (55.2%), jagged free end (44.7%), color alterations (39.5%), onychomadesis (34.2%), longitudinal ridges (34.2%), roughness (26.3%), transversal ridges (13.2%), longitudinal splitting (7.9%), transversal splitting, horizontal splitting, white spots and hemorrhages (2% each).

In 28 (73.7%) patients the nail changes were accompanied by psoriatic lesions located on nail folds (67.8%), on the phalanx (64.3%), on the back (78.6%) and palm (28.6%) of the hand.

Statistically significant higher frequency of nail changes (95% vs. 63.3%), higher number of involved nails/patient (15.9 vs. 10.8) and higher frequency of the lack of eponychium (89.5 vs. 21.1%), onychomadesis (57.9% vs. 10.5%) and nail plate roughness (47.3 vs. 5.2%) were established in patients with periungual psoriatic lesions.


Aim The aim of this study was to determine the epidermal water content in lesional and perilesional psoriatic skin before and after treatment with dithranol.

Materials and Methods. A total of 96 psoriatic plaques in 22 in-patients (4 women, 18 men, aged 27-82 years, with disease duration of 1-35 years and PASI score of 4.1-32.6) were studied. Epidermal hydration was determined by means of non-invasive skin capacitance meter (Corneometer CM 820, Courage+Khazaka, Cologne, Germany). Measurements were performed before and after 18±7-day treatment with dithranol.

Results The average values of electrical capacitance of psoriatic plaques (n=96) and adjacent healthy skin were 29.8±9.4 ÅÅ and 64.1±11.5 ÅÅ, respectively (P<0.001). After treatment, the values of electrical capacitance of psoriatic plaques (n=54) increased from 27.2±8.7 ÅÅ to 40.2±14.0 ÅÅ (P<0.001), while those of perilesional skin did not significantly change and were 63.5±11.3 and 64.9±11.9 ÅÅ, respectively. Conclusion Pathologic epidermis in psoriasis vulgaris is characterized by low water content, which increases after treatment with dithranol but remains lower than the water content of adjacent healthy skin.


The aim of the present study was to determine the effect of chronic sun exposure on the skin mechanical properties. We studied 73 volunteers (37 men, 36 women, aged range 10-79 years, mean age 41 years) by means of a noninvasive suction skin elasticity meter (Cutometer). Sun-exposed skin of the dorsal forearm showed a significantly lower distensibility and biological elasticity than the unexposed volar forearm skin. These changes are related to the massive increase and disorganization of the elastic tissue, which are
accompanied by lost of functional elastic fibers. The later plays an important role in maintaining the collagen fiber network, in controlling the movements of this network within the ground substance and in restoring the initial position of the skin after deformation. On both anatomical regions skin elasticity decreased and viscoelasticity increased with the age.


We used a non-invasive, in vivo suction skin elasticity meter to investigate age-related skin mechanical properties on 12 anatomic regions. A total of 40 volunteers was studied consisting of 10 young males, 10 old males, 10 young females and 10 young males. The parameters determined were Ue, immediate distension; Uv, delayed distension; Uf, final distension; Ur, immediate retraction; Ua, final retraction; R, residual deformation and their relations Ua/Uf, brut elasticity; Ur/Ue, net elasticity; Uv/Uf, biological elasticity; Uv/Ue, viscoelastic to elastic ratio and H, hysteresis. Aged skin was characterized by significantly lower elastic parameters (Ue, Uf, Ur, Ua/Uf, Ur/Ue, Ur/Uf) and higher viscoelastic parameters (Uv, Uv/Ue, H, R). On all the anatomic regions, the decrease in skin elasticity and the increase in skin viscoelasticity significantly correlated with the age. The changes were more pronounced on the sun-exposed sites. There were no sex differences. The method used is suitable for investigation of aging process and efficacy of topical preparations applied.


Modern bioengineering methods provide an objective information regarding the degree of the skin involvement and disturbances of the microcirculation in systemic and localized sclerosis. They are characterized by noninvasiveness, that allows repeated measurements, and achieving quantitative data subjected to statistical analysis. The changes in skin thickness and density can be evaluated by high-frequency ultrasound, nuclear magnetic resonance and elastometry. Microangiopathy can be studied by capillaroscopy, laser-doppler flowmetry, measurements of transcutaneous oxygen tension, thermometry and thermography. Noninvasive skin bioengineering methods are useful in monitoring the therapy effect and disease progression in patients with scleroderma.


From the skin lesions of 100 patients with primary pyogenic and secondary infected dermatoses, treated at the Department of Dermatology of Medical University – Plovdiv for the period 1992-1996 there were isolated 141 bacterial strains. Staph. aureus 62 (44%); b-streptococcus 40 (28%) and Gram negative
microorganisms – 39 (28%). The staphylococci were mostly sensitive to cephatrexil (100%), rimactan (91%), augmentin (84%), cloxacillin and amikacin (75%), and resistant to oxacillin (35%). The streptococci were mostly sensitive to augmentin and rocefin (100%), cephalexin (94%), carbenicillin (90%), chloramphenicol (83%), azlocillin and penicillin (75%), and resistant to biseptol (27%). The rest of microorganisms were eradicated in great extent by ciprofloxacin (100%), amikacin and gentamycin (60-70%). Multiple resistance to 2-5 antibiotics was found in 37% of the staphylococcus, 7.5% of the streptococcus and 55-83% of the Gram negative bacteria.


Effects of single application of pure petrolatum, paraffin oil, glycerin, water-in-oil emulsion (65% lipids) and oil-in-water emulsion (25% lipids) were studied on the volar forearm skin of 20 healthy volunteers. The epidermal hydration was determined with a skin capacitance meter (Corneometer) and values were followed for 120 min. Five minutes after the application of glycerin and O/W emulsion the skin capacitance showed an increase of 54% and 16% as compared with the initial values and slightly decreased after 2 hours to 35% and 12%, respectively (p<0.001). The application of W/O emulsion, paraffin oil and pure petrolatum caused an initial significant reduction of the capacitance, a recovery of the original levels after 30 to 60 min. and an increase of 11-14% after 2 hours (p<0.001). The results illustrated the different effect of the moisturizers tested and the influence of their non-absorbed components on the capacitance values.


Using the anamnesis data and testing the glycaemia on an empty stomach in the morning, as upon blood analysis and urinanalysis of the glucosae, it has been established that the dermatosis is accompanied by diabetes mellitus at 257 (4.9%) from the 5200 patients treated in the Department of Dermatology at the Medical University of Plovdiv within 5-year period (1989-1993). 110 (43%) of them are men and 147 (57%) are women. 241 (93.8%) of the patients are aged over 40. The causes for their registration are the following: pyodermia – 4, erysipelas – 87, herpes zoster – 35, mycosis – 14, psoriasis – 32, lichen planus – 2, urticaria – 19, eczema and dermatitis – 28, erythema multiforme and nodosum – 7, vascular diseases – 13, granuloma anulare – 1, necrobiosis lipoidica – 1, and others – 14. The duration of the diabetes is from a week to 30 years. In 170 (66%) of the cases it precedes the dermatosis and in 87 (34%) it is discovered afterwards. At 25 (9.7%) of the patients the deterioration of carbohydrate metabolism is the reason for a therapy change – from diet to maninil (at 14) and from maninile to insulin (at 11). The causes for their registration are the following: pyodermia – 4, erysipelas – 87, herpes zoster – 35, mycosis – 14, psoriasis – 32, lichen planus – 2, urticaria – 19, eczema and dermatitis – 28, erythema multiforme and nodosum – 7, vascular diseases – 13, granuloma anulare – 1, necrobiosis lipoidica – 1, and others – 14. The duration of the diabetes is from a week to 30 years. In 170 (66%) of the cases it precedes the dermatosis and in 87 (34%) it is discovered afterwards. At 25 (9.7%) of the patients the deterioration of carbohydrate metabolism is the reason for a therapy change – from diet to maninil (at 14) and from maninile to insulin (at 11).


A series of 358 patients with psoriasis vulgaris (202 men and 156 women), admitted for treatment in the Department of Dermatology, Medical University of Plovdiv over a six-year period (1989-1994), were studied. They are distributed in groups, as follows: 1) acute eruptive (guttate) psoriasis – 27 cases with
mean age 26 years; 2) exacerbated chronic psoriasis with guttate eruptive lesions – 55 cases (36 years); 3) chronic plaque psoriasis – 202 cases (45 years), and 4) miscellaneous types of psoriasis – 74 cases (50 years). In group one increased AST > 300 U is found in 37%, with chronic tonsillitis evidence established in 41% of the patients examined. In the other groups the values are accordingly: group two – 47% and 33%, group three – 20% and 41%, group four – 12% and 30%, and for the total group of psoriasis patients – 24% and 37%, respectively. Increased AST > 300 U is found in 9.9% of 55 patients with other noninfectious skin diseases under study (comparative group with mean age 45 years). In 20 psoriasis patients throat secretion is cultured, with beta-hemolytic streptococcus group A being isolated in four of them (20%). The obtained results confirm streptococcus infection involvement in the pathogenesis of psoriasis vulgaris, and give good reason to consider additional therapeutic approaches, particularly in the acute forms of disease.


It is reported a man aged 40 years with purpura pigmentosa chronica – Schamberg’ disease. Diagnosis is made on the basis of typical clinical picture which is histologically corroborated. Current concepts for the complex character of the disease pathogenesis are discussed. Most likely, the vascular changes are secondary to an inflammatory process, induced by humoral and cell-mediated immune mechanisms.


This is a report on a 26-year-old woman sustaining burning pain (soreness), itching, erythema, edema and bullae, with ensuing pigmentation of the skin areas of the limbs exposed to sunlight after green fig jam preparation. The photoepicutaneous testing with green-fig juice in healthy persons is positive, and correlates with the duration of irradiation and skin type. The photodependence of fig-induced dermatitis is attributed to the furocoumarins contained in the plant: psoralen (“ficusin”), 5-MOP (bergapten) and 8-MOP (methoxsalen).


The sun protection factor (SPF) of 10% indomethacin ointment, topically applied prior to exposure to ultraviolet light, is evaluated in a group of 20 persons, using a modification of the well know procedure. Analogical study is carried out on petrolatum ointment and on the so-called cold cream. A considerably higher photoprotective activity of indomethacin (SPF=11.08), as compared to the lower and virtually equivalent activity of the both vehicles (SPF=3.41 and 3.13), is noted. Proceeding from the obtained results, indomethacin is recommended for use as an active local sun protective agent.

The authors report for two males of 54 and 60 years, treated in the Department of Dermatology – Plovdiv on occasion of ulcers of the legs. The clinical and laboratory investigations of the patients established association with Klinefelter’s syndrome. The pathogenic mechanisms of the stasis changes in this genetic anomaly are discussed.


From the skin lesions of 127 patients with primary suppurative and secondary impetiginous diseases of the skin, treated at the Department of Dermatology – Plovdiv over the period 1987-1991, were isolated 164 bacterial strains: Staphylococcus aureus – 78 (47.5%), Streptococci – 46 (28.2%) and others (Proteus vulgaris, Escherichia coli, Pseudomonas, Enterococcus and Acinetobacter) – 40 (24.3%). Their susceptibility was determined towards 12 antibiotics. The staphylococci displayed the highest susceptibility towards cephatrexil (98%), rimactan (80%) and cloxacillin (74%), while resistance to ampicillin (51%). The streptococci were most susceptible to cephatrexil (100%), rimactan (87%), carbenicillin, azlocillin and chloramphenicol (80%), while resistant to ampicillin (14%). The remaining microorganisms were mostly influenced (70-100%) by gentamycin and amykacin. Multiple resistance to 2 up 5 antibiotics was established in 31% of staphylococci, 9% of streptococci and in 30% up to 100% of the remaining microorganisms. In 80% of the patients treatment with rimactan was successfully applied.


It is reported on 10 children with herpes zoster aged under 14, including 4 infants at 6, 7, 8 and 9 months of age. The clinical picture was distinguished for slightly apparent subjective complaints, mild course and lack of severe complications. Herpes zoster occurs in infants, subsequently to asymptomatic fetal infection or unrecognized varicella among children, born to varicella-zoster-virus-immune mothers.


Report is made for two patients with skin leishmaniosis, treated at the Department of Dermatology – Plovdiv. In the first patient was applied one-month treatment with disulon 100 mg, metronidazol 750 mg and doxycycline 200 mg daily, followed by local applications and muscular injections of pentostam 1 vial of 6 ml daily – 14 days, after which one month – ketoconazole 200 mg daily. Certain reduction of lesion size was observed, but complete recovery occurred six months later on. In the second patient after performance of nine-day course with monomycine 3 x 250 000 U intramuscularly daily and 5% unguent locally a rapid and obvious therapeutic effect was recorded with complete recovery after three weeks. The authors recommend the preparation monomycine as an agent of choice in the treatment of skin leishmaniosis.

An observation of the rare dermatosis carcinoma cuniculatum is described in a male aged 58 years. The tumour developed on the site of trophic ulceration on the left heel with duration more than 30 years. The diagnosis was established and verified clinically and histologically. Surgical excision and plastics were performed. The causes and manifestations of malignesation of long time non healing wounds and trophic ulcerations are discussed. Emphasis is laid on the significance of early diagnosis and correct therapeutic approach for the favorable outcome of the disease.


The diagnosis Bureau-Barriere’s syndrome (Acropathy ulceromutilans et deformans pseudosyringomyelitica) was established in a 61-year-old man based on the clinical and neurologic symptoms, laboratory data and course of the disease. Affected also was the upper right extremity with electromyographic changes, as well as evidence of spondylarthrosis and latent diabetes.


The relation between dates of birth and months of recidives, hospitalization and seasonal dependence are studied in 500 patients. Born in February, March, April and October suffer more often from psoriasis.


The case records of 323 patients with psoriasis vulgaris treated at the Dermatological Clinic of the Higher Medical Institute in Plovdiv during the years 1975, 1979, 1985 and 1989 are analyzed. The proportion of in-lying patients tends to be increased. Men, residents of urban settlements and workers are more frequently affected by psoriasis. Fifty five percent of the patients were in the most active age – between 20 and 50. A favorable tendency is noted toward decrease in the number of cases with early onset and familial psoriasis. The progress in the treatment of psoriasis has brought about a decrease in the average length of stay in hospital from 38 days in 1975 to 22 days in 1989.