ABSTRACTS FROM CURRENT LITERATURE

Treatment of vitiligo with khellin and ultraviolet A, Ortel B, Tanew A and Honigsmann H : J Amer Acad Dermatol, 1988; 18 : 693-701.

With a view to evaluate the efficacy and possible side effects of a new photochemotherapeutic regimen in vitiligo consisting of khellin, a furanochromone isolated from the seeds of the plant *ammi visnaga* and ultraviolet A (UVA) irradiation, the authors treated 28 vitiligo patients with the above regimen. Khellin was given orally in 25 patients in a dose of 100 mg (50 mg capsules) followed 2½ hours later by UVA exposure. Topical khellin was used in 3 patients as a 2% solution applied one hour before the exposure. Treatment was given thrice weekly. The results were comparable to psoralens. Repigmentation was observed 4 to 8 weeks after the start of treatment in the form of pigmented follicular spots tnat gradually enlarged and coalesced over a period of 8 to 24 months. More than 70% repigmentation was achieved in 41% of the patients after 100 to 200 treatments. Effective UVA doses ranged between 10 and 15 joules/cm.^{2} No phototoxic side effects occurred with khellin even after exposure doses of upto 100 joules/cm.^{2} Also there was no internal organ or skin toxicity. A mild elevation of serum transaminases was however found in 7 patients in the early phase of treatment which reversed to normal levels following stoppage of treatment.

The authors conclude that khellin photochemotherapy can serve as a valuable and safer alternative to conventional PUVA for the treatment of vitiligo. It can be used either with sunlight or artificial UVA sources. Both oral and topical khellin photochemotherapy may be less hazardous than PUVA regarding long-term side effects such as mutagenicity and carcinogenicity.

P B Haribhakti and Rita Macwan

Solar urticaria : Treatment with terfenadine, Rajatanavin N and Bernhard J : J Amer Acad Dermatol, 1988; 18 : 574.

The authors report a case of long-standing, treatment resistant solar urticaria in a 35-year-old woman who markedly improved with oral terfenadine. The patient was resistant to antihistamines, beta-carotene, sunscreens, PUVA and UVA phototherapy. She developed urtication and pruritus within minutes of sunlight exposure. Terfenadine in a conventional dose of 60 mg orally twice daily delayed and somewhat reduced her pruritus but when it was given in a dose of 180 mg (3 tablets) once daily half an hour before going outdoors, there was no edema and itching, but only blotchy macular erythema. There were no side effects of the drug. The authors believe that the blotchy macular erythema is an initial photochemical event which is different from the subsequent events of histamine release and/or action in solar urticaria.

P B Haribhakti and Rita Macwan

Aetinic lichen planus mimicking melasma, Salman S, Khallouf R and Zaynoun S : J Amer Acad Dermatol, 1988; 18 : 275-278.

Actinic lichen planus may have a melasma-like clinical presentation. The authors report 3 healthy female patients with actinic lichen planus who presented with asymptomatic large brownish to bluish patches symmetrically distributed on the face in a chloasma-like pattern.

There was no preceding skin inflammation. The condition was worse during summer. There was no history of any drug intake, contraceptive pills, use of topical medications or cosmetics. Also, there was no history of pregnancy at the onset of pigmentation or thereafter. Clinically, the lesions closely resembled melasma. The histopathological findings however differentiated the two conditions as the biopsy report showed distinctive features of lichen planus. The authors suggest that actinic lichen planus should be considered in the differential diagnosis of melasma. Whether hormonal factors (estrogen and progesterone) are responsible for the melasma-like pattern and whether there is a true female preponderance in melasmic actinic lichen planus requires careful study with a larger group of patients.

P B Haribhakti and Rita Macwan

Epidermolysis bullosa responds to vitamin E when properly administered, Ayres S : J Amer Acad Dermatol, 1987; 17 : 848.

Vitamin E has been reported to have given excellent results in various types of epidermolysis bullosa including the dystrophic forms. Patients not responding to corticosteroids and other immuno-suppressive drugs are claimed to have been successfully treated with vitamin E. The effective adult dose of the drug is 400 IU of d-alphatocopheryl acetate or succinate given 3 or 4 times a day before meals and at bed time. The dose may be reduced once the condition has been brought under control but may have to be continued indefinitely. The drug should be used with caution and in smaller doses in patients with hypertension, heart disease and diabetes. Simultaneous administration of inorganic iron and female hormones should be avoided as these cause inactivation of vitamin E. The effectiveness of vitamin E in epidermolysis bullosa and similar other autoimmune disorders appears to be due to its antioxidant effect which protects the lipid portion of cell membranes of various tissues from oxidation which destroys the cell liberating cellular enzymes into the circulation with damaging effects.

P B Haribhakti and R Macwan

Natural cell mediated cytotoxicity in vitiligo, Ghoneum M, Grimes P, Gill G et al : J Amer Acad Dermatol, 1987; 17 : 600-605.

Natural killer (NK) cells are large granular lymphocytes distinct from T and B cells constituting about 5% of the mononuclear cells in the human peripheral blood. They play an important role in tumor rejection, immune surveillance, resistance to infections and immune regulation. The cytotoxic activity of NK cells is mediated by the T helper cells which produce interferon and interleukin-2. A receptor on the NK cell first recognises and binds to the target cell. The NK cell is then activated causing release of cytotoxic factors which cause lysis of the target cell. The effector cell then recycles and binds to new target cells.

In view of the recent observations delineating aberrant cell mediated immunity in vitiligo, the authors investigated NK cell activity in 18 patients with vitiligo and 13 healthy matched controls. For this, 2 sensitive human NK cell susceptible target cells were used. (1) K562—a myelogenous leukemia cell line, and(2)Molt-4—a T lymphoid cell line from patients with acute lymphatic leukemia. There was no difference in the NK cell activity between the patients and the control subjects when K562 was used as a target cell, but a statistically significant depression of NK cell activity was found in vitiligo patients at all effector/target cell ratios when Molt-4 was used as target cell. Lytic units were also significantly depressed.

NK cells are not a homogenous population with respect to surface markers and tumoricidal activity, but there are many subsets of NK cells with substantial variability in target specificities

and phenotypes. The authors conclude that perhaps vitiligo patients have subpopulation of NK cells that are unable to recognise and bind to Molt-4 target cells. This perhaps also occurs with other tumor cells which explains the association of certain internal malignancies with vitiligo patients. The NK cells also exert a regulatory function on B cells. The decreased NK cell activity may also contribute to the increased frequency of autoimmune phenomena in vitiligo patients.

P B Haribhakti and R Macwan

Dorfman-Chanarin syndrome, Strebrnik A, Tur E, Perluk C et al : J Amer Acad Dermatol, 1987; 17 : 801-807.

The authors report Dorfman-Chanarin syndrome in 2 mentally retarded sisters from a consanguineous Israeli jewish family who presented with lamellar ichthyosis of the entire body including the face and the flexures that was present since birth. Peripheral blood smear showed prominent vacuoles in neutrophils, eosinophils, monocytes and basophils which took up oil red O and sudan red fat stains. No such vacuoles were found in lymphocytes, RBCs and platelets. EM showed lipid droplets not enclosed by a membrane. Skin biopsy sections on EM showed numerous lipid droplets in the granular and basal layers of the epidermis as well as in the upper dermal cells. The patients also had hepato-splenomegaly, ectropion and microcephaly. Dorfman-Chanarin syndrome is an autosomal recessive, multi-system disorder of lipid metabolism which manifests as congenital ichthyosis and deposition of neutral lipids in multiple organs such as the skin, muscles, liver and leukocytes. The CNS, the auditory and the visual systems are also variably involved. Heterozygous asymptomatic family members often show lipid vacuoles within the granulocytes. The disease is common in the Middle East and mainly affects Jewish-Iraqi families. Of the 14 cases reported so far, 11 were of middle eastern origin, 2 were Italian and one was Ugandan Asian.

P B Haribhakti and R Macwan

Oral hyposensitization in nickel allergy, Peter S, Ole C and Halvor M : J Amer Acad Dermatol, 1987, 17 : 774-778.

Patients with contact allergy to nickel have been known to exhibit flare-ups of their eczema after oral provocation with the metal. However, it has been found that after such provocation, many patients show improvement of their eczema. In an attempt to diminish the patients hypersensitivity to nickel by oral administration of the metal, the authors conducted two controlled double-blind studies each containing 24 females with patch test proved contact allergy to nickel.

Nickel was administered in the form of capsules containing nickel sulfate in sucrose. In the first study, the capsules contained 0.5 mg nickel which was taken daily for 6 weeks. In the second study, the capsules contained 5.0 mg of nickel and was taken once a week for six weeks. In both studies, about half the patients received only placebo tablets containing sucrose. Patch tests were performed one week before and after ingestion of nickel.

In the first study only one patient from the nickel group exhibited flare up of her eczema while the rest showed no reaction. This group also did not show any improvement in their eczema as measured by patch test results, while in the second study 8 out of the 12 patients receiving nickel showed mild flare-ups of their eczema. In this group, the degree of contact allergy was significantly lowered. It was concluded that oral hyposensitization is possible in patients with allergic contact dermatitis to nickel. High but not low doses are likely to influence the allergic state. The exact mechanism of

suppression of contact allergy reaction is not known but it is possible that antigen excess may stimulate or initiate the production of T suppressor cells. However the duration of the lowered hypersensitivity is not known.

P B Haribhakti and R Macwan

Histiocytic lymphoma simulating lepromatous leprosy. Balachandran C, Srinivas CR, Singh KK et al : Ind J Leprosy,1987; 59 : 332-333.

The authors report a case of nodular histiocytic lymphoma clinically simulating leprosy. A 36-year-old male presented with asymptomatic, skin-coloured, firm papular lesions mainly on the chest, face and extremities sparing the ear lobes, generalised lymphadenopathy, fever and joint pains. There was no clinical or laboratory evidence of leprosy. Bone marrow examination showed infiltration with histiocytes. The diagnosis of histiocytic lymphoma was confirmed by lymph node biopsy. Even though rare in India, histiocytic lymphoma should be considered under the differential diagnosis of lepromatous leprosy.

K Anitha

Leprosy with pellagroid features, Singh G, Dutta RK, Tutakne MA et al : Ind J Leprosy, 1987; 59 : 330-331.

The authors report a case of leprosy who presented with pellagroid features. A 27-year-old male who was a known alcoholic, presented with 2 years duration of bilaterally symmetrical dry scaly hyperpigmented lesions on the limbs and scaly erythematous lesions on the trunk without any sensory deficit. Nerves were found to be enlarged. In addition, the patient had anaesthesia along the ulnar distribution of the left hand and stocking area of lower limbs and ulnar clawing of the left hand. Skin-slit smears showed AFB and skin biopsy was suggestive of leprosy (BL). There was no evidence of pellagra. This case is an unusual presentation of leprosy.

K Anitha

Rifampicin-aluminium antacid interaction, Gupta PR, Mehta YR, Gupta ML et al : J Assoc Phys Ind, 1988; 36 : 363-365.

Rifampicin has established itself as a potent anti-tubercular and anti-leprosy drug. Antacids are being commonly used to combat rifampicin induced gastro-intestinal reactions. This study was conducted to see the effects of the antacid on the peak serum rifampicin concentrations. A significantly higher number of patients receiving anti-tubercular drugs along with antacid had serum rifampicin levels below 6.5 mcg/ml as compared to those receiving anti-tubercular drugs alone or with a mixed antacid. To be therapeutically effective, the tissue concentration of rifampicin should be several times higher than 12 mcg/ml. In lung tissues, such concentration is achieved when the peak serum levels of the drug are above 6.5 mcg/ml. Patients were randomly divided into 3 groups. No antacids were given to group I, while group II and III patients were given aluminium hydroxide, and aluminium hydroxide with magnesium trisilicate respectively. Aluminium hydroxide is known to relax the gastric smooth muscle of rat and man. The lowered peak serum rifampicin levels in group II patients were possibly due to delayed gastric emptying as a result of biophysical effects of aluminium ions. Presence of magnesium ions in group III patients nullified the effect of aluminium ions. It is therefore suggested that antacids should not be given concomitantly with rifampicin. If at all needed, a mixed antacid containing both aluminium and magnesium salts should be preferred over aluminium hydroxide alone.

Sree Rekha Panicker

Tetanus with leprosy, Tibrewala KD, Patel TK, Desai AR et al : J Assoc Phys Ind, 1988; 36 : 395-396.

Anaesthesia of the limbs in leprosy leads to frequent injuries, skin cracks, ulcers and tissue necrosis which are ideally suited for the growth of *Clostridium tetani*. But the incidence of tetanus is low in leprosy patients. Peri-neural and intra-neural fibrosis prevents the spread of tetanus exotoxin along the peripheral nerves. A case of leprosy developed tetanus. The patient was a known case of lepromatous leprosy with deformities of the upper limbs, and admitted with trismus and convulsions. He had history of multiple trauma and ulcers in the extremities off and on.

Sree Rekha Panicker

Rhinosporidiosis of vagina, Nair S and Hennah P : J Tropical Med Hyg, 1987; 90 : 329.

Rhinosporidiosis is caused by *Rhinosporidium seeberi*. Most observers consider it to be a fungus. It usually involves the nasal mucosa and less often conjunctiva and rarely effects other sites. The authors report a case of vaginal rhinosporidiosis. A 60-year-old post-menopausal woman presented with a growth in the vagina of one year duration. This cauliflower-like polypoidal growth after excision was sent for histopathological examination. Typical features of rhinosporidiosis were observed. Rhinosporidiosis of the vagina is extremely rare and the mode of transmission of this disease is unknown.

N Sasi

Mycosis fungoides beginning in childhood and adolescence, Koch SE, Zackhem HS, Lebat PL et al : J Amer Acad Dermatol, 1987; 17 : 563-570.

Mycosis fungoides is a form of cutaneous T-cell lymphoma that commonly arises in middle-aged and older adults. Authors identified a five-year-old girl with an erythematous scaly skin eruption of two years duration. Histopathological study revealed mycosis fungoides. This prompted the authors to review other eleven cases of mycosis fungoides, in whom the skin lesions historically began before the age of 20 years. In all cases, the lesions were clinically and histopathologically consistent with mycosis fungoides. This report emphasizes the need to consider the diagnosis of mycosis fungoides in children and adolescents with chronic scaly skin eruptions which do not respond to topical corticosteroids.

N Sasi

Ichthyosiform sarcoidosis, Kupin LB and Pelachyk JM : J Amer Acad Dermatol, 1987; 17 : 616-620.

Sarcoidosis has multiple clinical manifestations including specific and non-specific cutaneous lesions. An ichthyosiform eruption has only rarely been reported. The authors report two patients with acquired ichthyosis of the lower extremities whose diagnosis of cutaneous sarcoidosis was established by histopathological examination. Systemic involvement in both the patients included ocular and pulmonary lesions. The authors strongly advise a skin biopsy in such patients.

N Sasi

Penicillin aliergy : how to diagnose and when to treat, Holgate ST : Brit Med J, 1988; 296 : 1213-1214.

True IgE dependent penicillin anaphylaxis has an incidence of only about 0.05% For its development, IgE dependent activation of mast cells and basophils is necessary. The major antigenic determinant is formed by the linkage of penicilloyl group with the tissue proteins, and the minor determinants are the penicillin itself, penicilloate and penilloate. Majority of

the patients who are allergic to penicillin can tolerate the drug when given again as the sensitisation may only be temporary and so the only major contra-indication for the use of penicillin is the anaphylactic response. Also, a patient who is allergic to penicillin need not be sensitive to ampicillin. The IgE related sensitisation can be confirmed by the skin prick testing with a derivative of the major determinant, benzyl penicilloyl polylysine at a concentration of 60 m mol/l and the minor determinants at a concentration of 10 m mol/l. A wheal and flare reaction after 10-15 minutes, 3 mm or more in diameter and greater than a saline control is considered a positive response. Almost all beta lactam antibiotics show some cross sensitisation although it happens little with cephalosporins and almost never with the new beta-lactam antibiotics like monobactan aztreonam and carbapenem imipenem. Those patients who need penicillin for an overwhelming bacterial infection and at the same time have a strong history of penicillin anaphylaxis should be desensitised. Desensitisation should preferably be done in an intensive care unit. The commonest method is by giving gradually increasing doses of penicillin, first intradermally followed by SC, IM and IV injections. Antihistamines or corticosteroids should not be given and after the procedure, a full course of penicillin can be given. As a result of this procedure, the cellular threshold for triggering by IgE antibodies on mast cells and basophils is raised. But it does not induce the blocking IgG antibodies. As a result, the protection is short and the desensitisation has to be repeated for further drug courses.

K Anitha

Anogenital papilloma virus infection in children, Oriel JD : Brit Med J, 1988; 296 : 1484-1485.

Anogenital warts in adults are caused by HPV types 6,11,16 or others. In children, these are rare and may be genital or non-genital. Most cases are supposed to be due to sexual abuse. Virus can also be transmitted to the child during delivery, leading either to the development of anogenital warts or juvenile laryngeal papillomas. Hybridisation studies have confirmed the origin of these viral strains from the adult genital tract. The anogenital warts can also occur as a result of autoinoculation from a cutaneous strain. So when we come across a child with anal or genital warts, we should investigate first to rule out sexual abuse. As regards treatment in children, ablation of all the lesions under general anaesthesia is a better method than the topical treatment.

K Anitha

Systemic lupus erythematosus in Northern India—a brief outline of clinical features and current trends in the management : Malaviya AN, Singh RR, Kumar A et al : J Applied Med, 1987; 36 : 476-479.

This is a 13-year study of SLE patients. Based on clinical and serological activity, the patients were categorised into four groups and treated accordingly. Group I had mild mucocutaneous musculo-articular, and constitutional symptoms with absence of serositis, and nervous system or renal complications. Group II was also mild but had unresponsive SLE or with polyserositis. Group III was moderately severe SLE with prominent general symptoms, mucosal ulcers, rash, musculo-articular symptoms, thrombocytopenia and/or unresponsive serositis. Patients with acute toxic SLE were also included in this group. Group IV had severe SLE with severe multi-organ system involvement including renal and nervous systems. Patients of Group I received chloroquine (250 mg) or hydroxy-chloroquine (200 mg) daily for 6 months followed by the same dose on alternate days, on a long-term basis and non-steroidal anti-inflammatory drugs. Group II patients were given the above drugs and low-

dose oral prednisolone 7.5-20 mg daily. Group III patients received moderately high doses of oral prednisolone (1 mg/kg body weight daily). In the absence of response within one week pulse therapy with methyl prednisolone 250-1000 mg or equipotent dexamethasone I/V over 1 hour upto a maximum of 3 consecutive days was instituted. Patients not responding to the above measures were treated with cyclophosphamide (0.5-0.7 g/m² body surface area) as an I/V pulse every 3 weeks upto 6 doses, followed by maintenance pulses every 6-12 weeks in many patients. The therapy was combined with low daily or alternate day dose of prednisolone in most patients. Group IV patients received alternate cytotoxic drugs (oral) cyclophosphamide 2-2.5 mg/kg body weight or methotrexate 7.5-15 mg weekly orally or intravenously alone or in combination with prednisolone (0.5-1 mg/kg body weight) per day. All patients were treated according to the protocol. Fifty percent of patients in Group I responded to therapy, while 25% had continued mild symptoms. The remaining 25% deteriorated and were included in Group II; 70% of these patients responded well to therapy while 30% deteriorated. Only 25% of patients in Group III responded to therapy. In those who were not responding to that line, 70% responded to augmented therapy. Maximum deaths occurred in group IV, the cause of death was irreversible renal damage in most of the cases.

P Sreerekha

Treatment of advanced squamous cell carcinoma of skin with isotretinoin, Scott ML and Frank ZM : Ann Int Med, 1987; 107 : 499-501.

Squamous cell carcinoma of the skin is the second commonest cancer affecting the population. About 90% of the patients are cured with surgery. Chemically induced cancers are most refractory to treatment. The limited available data on systemic chemotherapy indicate that it is highly toxic and yields generally poor results. Vitamin A is essential for normal differentiation of epithelial tissues. Retinoids accumulate in the skin, and are active in certain pre-malignant and malignant cutaneous disorders. The authors used isotretinoin (1 mg/kg body weight) to treat 4 patients with refractory cutaneous squamous cell carcinoma. All patients had major disease regression beginning within 4 weeks of therapy. Toxicity was mild and reversible. Retinoic acid can induce a significant increase in the number of epidermal growth factor receptors and this increase correlates with growth inhibition in certain cell lines.

P Sreerekha

Identification of human herpes virus-6 as a causal agent for exanthem subitum, Yamanishi K, Okuno T, Shiraki K et al : The Lancet, 1988; 1 : 378-380.

Exanthem subitum (roseola infantum) is a common disease of infancy characterised by high fever for a few days and the appearance of a rash coinciding with subsidence of the fever. In this study, the authors collected blood samples from patients with exanthem subitum during the febrile phase. A virus was isolated from the samples, cultured successfully in cord blood lymphocytes, and shown to be antigenically related to human herpes virus-6 (HHV-6). Morphological features, as studied by thin-section electronmicroscopy, resembled those of herpes group viruses. Convalescent-phase serum samples, tested against the new viral antigen and HHV-6 antigen, showed sero conversion. From the results, the authors strongly suggest that the newly isolated virus is identical or closely related to HHV-6 and is the causal agent for exanthem subitum.

Jayakar Thomas

Treating hyperhidrosis, Simpson N : Brit Med J, 1988; 296 : 1345.

The author has reviewed the older methods and described the newer techniques for the

treatment of localised hyperhidrosis especially of the palms and soles and the axillae. The side effects of benzodiazepines and anticholinergics limit their wide use in hyperhidrosis. Scarring and the loss of mobility of shoulder may result from surgical excision of the skin of axilla. Non-sweating of the palms following sympathectomy may result in hyperkeratosis and fissuring of the palms. The electrical treatment iontophoresis, has become popular in recent years. Two electrodes and a reliable source of low amperage direct current are required. One electrode is placed under the area to be treated in a shallow water bath and the other is attached to the contralateral limb. Axillae may be treated by a moistened pad placed over an electrode in the axillary vault. Iontophoresis together with induction of the anticholinergic agents poldine methosulphate or glycopyrronium bromide into the skin produce freedom from sweating for 4 to 6 weeks after a few exposures. The mechanism of action of iontophoresis is not fully understood. Blockage of the sweat duct and a reversal of a so called electric gradient along it have been suggested.

K Pavithran

AIDS cases reported to SFI unit, Global programme on AIDS; (Update) WHO, Geneva, 31 August, 1988.

The number of cases of AIDS reported to WHO has increased significantly in the past few years. By the end of 1987, the cumulative total of AIDS cases was 92750, reported from 130 countries, out of which 41494 cases were identified in the year 1987 alone. Till 31st August 1988, 19097 new cases have been added to the list, making a cumulative total of 111847 established AIDS cases. Ten new countries have reported AIDS during 1988, raising the number of countries showing the presence of AIDS cases to 140 out of a total of 177 countries reporting on AIDS to WHO. India, Indonesia, Sri Lanka and Thailand are the only countries reporting presence of AIDS in the south east Asia region, among which only Indonesia has reported 2 new cases of AIDS during the year 1988. WHO now estimates the actual cumulative number of AIDS cases at approximately 2.5 to 3 lacs, or more than twice the number of officially reported cases.

Pramod K Nigam