

ABSTRACTS FROM CURRENT LITERATURE

AIDS, Mann J : World Health Forum, 1987; 8 : 361-372.

AIDS—the acquired immunodeficiency syndrome is a global pandemic. Occurring since 1978, the geographical and biological origins of the virus are not clear. The newly recognised retrovirus, named Human Immunodeficiency Virus (HIV) has been shown to cause AIDS. A unique cellular mechanism gives rise to an infection which probably lasts lifelong. Three major HIV associated outcomes have been described—AIDS, AIDS-related illness and HIV neurological disease. Opportunistic infections such as *Pneumocystis carinii* pneumonia (very common), cytomegalovirus, herpes virus and parasites like *Toxoplasma* or *Cryptosporidia* can be very serious with a fatality rate of 90%. HIV is neurotropic and can give rise to a variety of symptoms attributable to the central or peripheral nervous system. AIDS is primarily a sexually transmitted disease with an incubation period of 6 months to 5 years. Blood, semen and vaginal secretions are mainly implicated in the transmission though the virus has been found in other body fluids as well. The incidence is steadily rising worldwide, 5-10 million are already infected and upto 3 million new cases could occur by 1991. Intrauterine infection can occur. A number of drugs are being tried to restore the immune function of an AIDS patient amongst which, the antiviral drug zidovudine and its analogues show some promise. However, neither a better cure, nor a vaccine is likely to be available in the near future. In the face of this, it is wise to advise those at risk, a change in sexual behaviour, use of condoms and screening of blood and blood products before transfusion.

V Ramesh

A new method of scabies control for developing countries, Chaturvedi RM and Kartikeyan S : World Health Forum, 1987; 8 : 357-358.

Authors describe the drawbacks of the existing method using 25% benzyl benzoate (BB) lotion. They used 150 litres of 10% BB lotion in a concrete tank. Families with scabies and their contacts were given a bath and asked to squat inside the tank pouring mugfuls of lotion neck downwards. For the next 24 hours they were asked to avoid a bath. It was found to completely cure 83% of the patients after one dip compared to 46% in those applying 25% BB lotion at home. This method could be extended to urban slums using separate plastic tanks for males and females.

V Ramesh

Neonatal herpes simplex virus infection occurring in second twin of an asymptomatic mother : Failure of a modern protocol, Growdon WA, Apodaca L, Cragun J et al : JAMA-India, 1987; 1 : 453-456.

Neonatal herpes infection is a serious condition associated with a high fatality rate in the infants. Those who survive develop sequelae, mostly of the central nervous system. Any patient with a past history of herpes genitalis infection should be closely followed up during pregnancy and repeated cultures of cervical and vaginal secretions should be performed to exclude asymptomatic viral shedding.

The authors report a case of neonatal herpes that occurred after vaginal delivery in the absence of genital lesions. The mother, aged 30 years, was addicted to various drugs and had history of only one attack of herpetic vaginitis, one year prior to her present pregnancy. There was no

history of recurrent herpetic infection. Asymptomatic shedding of herpes simplex type 2 virus was proved by culture in the second trimester of pregnancy. Repeated cultures in the later part of pregnancy were negative for virus. In spite of being followed up with a protocol of close surveillance and serial culturing of the genital tract, the patient gave birth to twins, one of whom developed neonatal herpes in the postpartum period, with involvement of CNS. He was treated with vidarabine for 14 days. Follow-up on this infant has revealed evidence of psychomotor retardation, seizures and other neurological sequelae.

K Pavithran

Activity of selected beta-lactam antibiotics against *Mycobacterium leprae*, Shepard CS, Van Landingham RM, Walker LL et al : Internat J Leprosy, 1987; 55 : 322-327.

The beta-lactam antibiotics—penicillins, cephalosporins and cephamycins, act by inhibiting the enzyme transpeptidase. This enzyme cross-links peptidoglycans into the rigid, skeletal structure of the bacterial cell wall. Activity of cephaloridine against *M. leprae* in mice has already been reported. The authors determined the activity of 12 commonly used beta-lactam antibiotics against *M. leprae*, using kinetic method. Significant inhibition of the growth of *M. leprae* was obtained by treatment of mice with 7-aminocephalosporanic acid, cefoxitin and cefuroxime. But one penicillin, mezlocillin, exerted a possible growth-promoting activity. This apparent growth promotion by mezlocillin was caused by interference with cross-linking in the cell envelope, thereby rendering it more permeable to nutrients. The authors conclude that even if more active compounds are not found, it is possible that some beta-lactam compounds, because they interfere with cell wall synthesis, will be useful in combination with other active compounds.

K Pavithran

HLA antigens and neural reversal reactions in Ethiopian borderline tuberculoid leprosy patients, Ottenhoff THM, Converse PJ, Bjune G et al : Internat J Leprosy, 1987; 55 : 261-266

Type I reversal or upgrading type of lepra reaction which usually develops within one year after commencement of therapy, is known to be associated with a rapid increase in the cell-mediated immunity. Clinical and histopathological changes show a shift towards the tuberculoid pole of the spectrum. Lymphocytes from such patients respond to the mycobacterial antigen in vitro in a stronger way than from patients with BT leprosy, not in reaction.

The exact mechanism of the development of reversal reaction (RR) is not well understood. Because HLA-linked genes have been shown to be an important factor in determining the type of leprosy that develops in susceptible individuals and because HLA molecules regulate cellular interactions in immune system, the authors investigated whether RR are associated with HLA antigens in Ethiopian patients. Whereas HLA class I or class II antigens were not found to be associated with the development of RR in BT patients or with susceptibility to BT per se, the data presented in this study showed that HLA-DR₃ is associated with high responsiveness to intradermally injected *M. leprae* antigens in BT patients with RR.

K Pavithran

Photosensitivity to non-steroidal anti-inflammatory drug piroxicam, Halasz CLG : Cutis, 1987; 39 : 37-39.

Many non-steroidal anti-inflammatory drugs have been reported to cause photosensitivity. These include benoxaprofen, sulindac, meclofenamate and indomethacin. Piroxicam, an oxycam chemically unrelated to benoxaprofen has also been reported to cause photosensitivity. The author reports 2 cases, a 61-year-old male

and a 49-year-old female, of photosensitivity following piroxicam therapy. The action spectrum appeared to be in the ultraviolet A (range 320 to 400 nm). The characteristic clinical features of photosensitivity in these patients included an acute eczematous dermatitis with frank vesicle formation. The histopathological features included spongiosis and a perivascular mononuclear cell infiltration in the dermis. The mechanism of photosensitivity is not well delineated, though in case of benoxaprofen induced photosensitivity, a photodynamic, oxygen-dependant mechanism for cell membrane disruption has been demonstrated. The author states that the non-steroidal anti-inflammatory agents as a class should be considered as the cause of any photosensitivity disorder. Avoidance of exposure to sunlight for several days following discontinuation of the offending drug may be advised due to its prolonged half-life.

K Pavithran

Childhood psoriasis, Hutton KP, Orenberg EK and Jacobs AH : *Cutis*, 1987; 39 : 26-27.

Psoriasis is not uncommon in children. In one study, 12% of the patients had onset of their skin lesions before the age of 10 years. Rarely, it may be observed in a patient who is only a few days old. Infantile psoriasis should be considered in the differential diagnosis of diaper dermatitis, fungal infection, eczema and seborrhoeic dermatitis. Genetics play a role in the causation of psoriasis. If one parent is affected, each of his or her child has 25% chance of developing the disease; if both parents are affected, this risk is increased to 60 to 70%.

Childhood psoriasis is aggravated by infection in more than 45% of cases. It follows streptococcal throat infection in many children. Tonsillectomy may result in improvement in more than two thirds. Rarely, measles and tinea pedis also cause an exacerbation. Psoriasis

in children differs from that in adults in that it is more frequently precipitated by infections and initiated or exacerbated by emotional trauma; it is more common on the face and scalp; it is frequently pruritic and the lesions are thinner, softer and less scaly. The clinical variants in children are guttate, napkin, plaque, facial and follicular psoriasis. Of these the acute guttate type is the commonest. Management of psoriasis in children should be conservative. Parents should be informed of the Koebner phenomenon. Children usually respond to mild coal tar preparations. Corticosteroids whether topical or systemic should as far as possible be avoided. Methotrexate is too hepatotoxic and the safety of retinoic acid in children remains to be established. Consideration of the psychological aspects of the disease in children are also important in its management.

K Pavithran

Short-contact anthralin therapy for psoriasis using an aqueous cream formulation, Kingston TP, Lowe NJ and Whitefield M et al : *Cutis*, 1987; 39 : 155-157.

Anthralin has become established as safe and effective for the treatment of chronic plaque psoriasis. The authors investigated the effectiveness and convenience of short-contact therapy with anthralin cream by a comparison with overnight therapy. Anthralin ointments and pastes are difficult to apply and it is also difficult to wash them off with soap and water. A cream formulation overcomes these inconveniences. Twenty patients were included in the study. The cream was applied to one side of the body overnight and to the other side of the body in the morning. Thirty minutes later it was washed off both sides in a bath or shower. This study showed that, with a thirty minute contact time, the patients respond as effectively as with overnight therapy. Short contact treatment reduced staining and irritation.

N Surendran Pillai

Clinical application of recent advances in immunology of leprosy, Talwar GP, Moudgil KD and Munshi A : Ind J Leprosy, 1987; 59 : 119-126.

Two types of applications emerge from the study of immunology of leprosy—simple and reliable immunological methods for diagnosis and the development of a vaccine for the immunotherapy and prevention of the disease. Both *M. leprae* specific as well as cross reactive human monoclonal antibodies are produced by hybridoma technique. These antibodies can be used for purification of the constituents unique to *M. leprae* by affinity chromatography. A radiometric immunoassay using monoclonal antibody has been reported for the diagnosis of leprosy. These can also be used to detect the presence of *M. leprae* in slit smears, nasal smears and tissue biopsies. For immunodiagnosis, FLA-ABS test and a simplified dipstick dot enzyme immunoassay has been evolved.

Four vaccines are under study for leprosy—Killed *M. leprae* along with live BCG, *Mycobacterium W*, ICRC bacillus and killed *M. leprae* alone. Cloning of *M. leprae* genes by recombinant DNA technology enables the production of *M. leprae* specific antigens in abundant amounts; and the antigens unique to *M. leprae* could be screened for their ability to induce protective immunity in experimental systems. Such antigens would prove useful for the development of sub-unit anti-leprosy vaccines.

N Surendran Pillai

Topical minoxidil in male pattern baldness : Effects of discontinuation of treatment, Olsen EA and Weiner MS : J Amer Acad Dermatol, 1987; 17 : 97-101.

Two or three percent topical minoxidil applied twice daily stimulates non-vellus hair growth in men with male pattern baldness. Ten men with male pattern baldness who had been treated with 2% or 3% minoxidil for at least

4 months were evaluated for any changes in scalp hair growth on and off the drug. Hair counts showed an increase in the non-vellus hair counts with continued use of topical minoxidil. On stopping minoxidil, four men had non-vellus hair counts below baseline and eight of ten subjects had hair counts below that at the termination of topical minoxidil therapy. For sustained hair growth continued use of topical minoxidil is necessary.

Joyce Thomas

Port-wine stains : A new hypothesis, Rosea S and Smoller BR : J Amer Acad Dermatol, 1987; 17 : 164-166.

Histochemical studies have shown port-wine stains to represent a progressive ectasia of the superficial vascular plexus. Alteration in the sympathetic innervation, due to defective maturation or loss of innervation may be the basic lesion as demonstrated by a reduced bulk of neural tissue. If this hypothesis is correct, instead of using argon-laser irradiation for destroying the lesions, future research should be directed to modulating vascular tone with topical sympathomimetic agents or by other means.

Joyce Thomas

Nail changes associated with diabetes mellitus, Greene RA and Scher RK, J Amer Acad Dermatol, 1987; 16 : 1015-1021.

Nail changes associated with diabetes mellitus vary from onycholysis to extensive irreversible destruction of nail. Though no change is truly pathognomonic of the disease, these act as valuable indicators of the systemic disease. The role of vascular and neurological systems in the pathogenesis of these nail changes is presented.

Mercy Paul

Azathioprine in the treatment of pemphigus vulgaris, Aberer W, Wolf Schreiner EC, Sting IG et al : J Amer Acad Dermatol, 1987; 16 : 527-533.

Twenty nine patients treated with corticosteroid-azathioprine regimen for pemphigus vulgaris, were followed up for periods ranging from 4-16 years. Dosages of the drugs were gradually tapered depending on the indirect immunofluorescent values. Forty five percent were free of disease and had been without therapy for upto 132 months; 38% were clinically free but still had low antibody titres and were on low dose maintenance treatment; and 17% were well controlled, but not completely free of disease. Side effects observed during treatment were mostly due to the corticosteroid.

Mercy Paul

Chemexfoliation—Indications and cautions, Lober CW : J Amer Acad Dermatol, 1987; 17 : 109-112.

Chemexfoliation or chemical peeling is used both therapeutically and cosmetically. Most commonly used chemical for face is phenol at a concentration of 48%. It is conjugated in the liver and excreted mainly through the kidneys. So it may be toxic to these organs. So before starting treatment hepatic and renal functions are to be checked. Most important is the cardiotoxicity in the form of arrhythmias when applied to intact skin. This occurs usually within 20 minutes after applying phenol to the face. So a pretreatment ECG and a continuous cardiac monitoring during the process is mandatory. It will be safe if small areas are treated, giving adequate intervals of 15-30 minutes between applications. The indications are fine wrinkling, abnormal pigmentation, damage due to radiation, freckles, superficial acne scarring, hyperkeratosis, fine facial rhytides, spotty hyperpigmentation, actinic keratosis, superficial acne

scars and as an adjunct to other procedures like blepharoplasty. Another chemical used is trichloroacetic acid used for both superficial (25-30%) and deep peeling (50-70%). As it is not absorbed systemically in significant amounts, it can be used in hepatic, renal or myocardial dysfunction. Superficial chemexfoliation is used to improve skin texture, lighten hyperpigmentation, soften the appearance of enlarged pores, treat acne scars and to remove fine facial lines. Deep one is used in small lesions like xanthelasma and lentigo. Complications are hypertrophic scars, keloids, hyper and hypopigmentation, accentuation of pre-existing abnormalities, (for example, increase in telangiectasia, enlargement of pores, darkening of nevi) milia, persistent erythema, flare of herpes simplex, persistence of fine wrinkles and full thickness skin loss.

K Anitha

Treatment of chronic post-herpetic neuralgia with topical capsaicin, Bernstein JE, Bickers DR, Dahl MV et al : J Amer Acad Dermatol, 1987; 17 : 93-96.

An endogenous neuropeptide namely substance P is found to play an important role in the mediation of pain in post-herpetic neuralgia. It is distributed in the small diameter peripheral sensory neurons which terminate in skin and substantia gelatinosa. The treatment of post-herpetic neuralgia remains unsatisfactory. A new substance capsaicin when applied topically is found to be the most effective of those identified so far, for the depletion of substance P. Chemically, it is trans-8-methyl N-vanillyl 6-nonenamide, found in the fruits of plants coming under solanaceae family. It is known to enhance the release of and inhibit or prevent the reaccumulation of substance P from cell bodies and nerve terminals in the central and peripheral nervous systems. In one study, out of 14 patients 75% reported with very good

response. Only one patient complained of intermittent burning sensation. These results suggest that topical application of capsaicin may provide a novel approach for alleviating post-herpetic neuralgia.

K Anitha

Immunological studies in chronic muco-cutaneous candidiasis before and after ketoconazole treatment, Mobacken H, Lindholm L and Moberg S : Acta Dermato-Venerol (Stockh), 1987; 67 : 257-260.

In eight patients with chronic muco-cutaneous candidiasis, the immune status was studied before and after treatment with ketoconazole for 6 months. Though there was clinical improvement, there was no restoration of the lymphocyte reactivity in vitro or in vivo. The marked therapeutic response denotes a significant decrease in the antigen load. Though ketoconazole is reported to inhibit the lymphocyte response in vitro, this effect was not found in this study. The present study supports a primary disturbance of cell-mediated immunity in chronic muco-cutaneous candidiasis.

Molykutty Francis

Hair root studies in patients suffering from primary and secondary syphilis, van der Willigen AH, Peereboom-Wynia JDR, van der Hoek JCS et al : Acta Dermato-Venerol (Stockh), 1987; 67 : 250-254.

The hair root status was studied in 11 patients with primary syphilis and 8 patients with secondary syphilis. Both groups showed a statistically significant decrease in the number of anagen hair roots and an increase in the number of catagen hair roots. There was also a significant increase in the number of anagen hair roots with sheath and with more than 20° angulation (Normal value 1%) in both groups. The circulatory disturbance caused by peri-

vascular inflammatory infiltrate may be responsible for the abnormal angulation, shortening of the anagen phase and transition from catagen to telogen phase. The focally sclerotic collagen bundles seen around the hair follicle may explain the angulation in the anagen hair roots. Histologic and immunologic studies are necessary to explain the clinical differences between primary and secondary syphilis.

Molykutty Francis

On the pathogenesis of idiopathic guttate hypomelanosis, Falabella R, Escobar C, Giraldo N et al : J Amer Acad Dermatol, 1987; 16 : 35-44.

Idiopathic guttate hypomelanosis is a benign leukodermic dermatosis of unknown etiology. The authors noted that this dermatosis was much more prevalent in women than men and that too with advancing age. They could not establish the cause effect relationship between chronic actinic exposure and the development of idiopathic guttate hypomelanosis in 15 patients studied in detail. Patients showed a genetic predisposition. These authors found in addition to the absence of melanocytes and melanin, the basket weave hyperkeratosis and some degree of epithelial atrophy with papillary flattening of the rete pegs. These lesions do not repigment, although their appearance can be modified with intralesional triamcinolone. Normally pigmented graft on this lesional site lost the pigmentation. This suggests an active depigmentary mechanism in this dermatosis.

K Sobhanakumari

The treatment of resistant mosaic plantar warts with aggressive cryotherapy under general anaesthetic, Rademaker M, Thomas MRH and Munro DD: Brit J Dermatol, 1987; 116 : 557-560.

Most viral warts are curable within 3 months by conventional methods of treatment such as topical salicylic acid and cryotherapy. But

mosaic plantar warts are very resistant to such treatment. Authors treated 12 patients with treatment-resistant mosaic warts with aggressive cryotherapy under a general anaesthetic. An ice ball was produced with a cryogen gun and maintained by intermittently spraying the wart for 45-60 seconds with liquid nitrogen. This was repeated 5 minutes after the ice ball had thawed. Seven (58%) patients had complete cure, 2 (16%) patients experienced substantial but incomplete clearing and 3 patients had no improvement. The procedure was well tolerated and post-cryotherapy pain was acceptable to the patients. The encouraging results indicate that aggressive cryotherapy under general anaesthesia is a useful third line treatment for resistant plantar warts.

N Sasi

Cimetidine and chlorpheniramine in the treatment of chronic idiopathic urticaria, a multi-centre randomized double blind study, Blechen SS, Thomas SE, Greaves MW et al : Brit J Dermatol, 1987; 117 : 81-88.

One hundred and twenty patients with chronic idiopathic urticaria were entered in a study at five centres. The duration of the disease was from 3 months to 47 years with no identifying aetiology. Patients with urticarial vasculitis and dermographism were excluded. The study was conducted in two phases. In the first phase of 6 week period, chlorpheniramine starting 4 mg qid alone was given. This dose was increased 2 weekly if there was no response. In phase two study, the chlorpheniramine responders continued the treatment. Chlorpheniramine non-responders were entered into a double blind study and received chlorpheniramine and cimetidine 400 mg qid (21 patients) or chlorpheniramine plus a placebo (19 patients), for further 8 weeks. The most important response measure was the change from the baseline of total symptom score, an

assessment of the number and duration of new wheals and degree of itching. There was a statistically significant difference between the average response in the two treatment groups in favour of chlorpheniramine plus cimetidine after 4-8 weeks treatment. No side effects were noted. The results of this study indicate that the combination of H₁ and H₂ antagonists may be useful in patients with chronic idiopathic urticaria.

N Sasi

Congenital triangular alopecia, Tosti A : J Amer Acad Dermatol, 1987; 16 : 991-993.

Author reports 14 cases of congenital triangular alopecia. It was first described by Sabouraud in 1905. Only 16 cases were reported after that. Of these 14 cases, 8 were females and 6 males. In most cases, the patch of alopecia was noticed between 3-6 years of life. In eight cases; the left fronto-temporal region was affected, in five the right fronto-temporal region and the remaining one had it bilaterally. All these were triangular in shape. The skin of the affected area was normal. Five had family history of alopecia areata. One had associated Down syndrome and another child was mentally retarded. All cases on histopathology showed normal epidermis and vellous hair follicles in the dermis. This is a common condition.

K Sobhanakumari

Nifedipine in the treatment of Raynaud's phenomenon in patients with systemic sclerosis, Thomas RHM, Rademaker M, Grimes SM et al : Brit J Dermatol, 1987; 117 : 237-241.

A double blind placebo controlled cross over trial of nifedipine in a dose of 10 mg thrice daily for six weeks was given to ten patients with Raynaud's phenomenon secondary to systemic sclerosis. Though the duration and frequency of the attacks and the development of ulcers

were reduced and the digital blood flow was found to be increased, these results were not found to be statistically significant. The red cell deformability and the leucocyte chemiluminescence were also found to be unaffected by nifedipine.

Mollykutty Francis

Serum interferon in systemic lupus erythematosus, Nee SS, Fang FS and Yumei W : Brit J Dermatol, 1987; 117 : 155-159.

Serum interferon levels were estimated in 67 samples obtained from 47 patients with SLE. Significant increase was noted in 70% of the samples and 72% of the patients and still higher levels in patients with active disease. The interferon level can be regarded as one of the several parameters reflecting the disease activity. Interferon levels were directly related to the antinuclear antibody titre and inversely related to serum C₃. The interferon was shown to be of alpha type. Since interferon may be a mediator of the pathophysiology, it is not recommended in the therapy of SLE.

Mollykutty Francis

Weekly psoriasis therapy using intra-lesional 5-fluorouracil, Pearlman D, Youngberg C and Engelhard C : J Amer Acad Dermatol, 1987; 17 : 78-82.

The authors report the use of weekly intra-lesional 5-fluorouracil for treatment of entire psoriatic papules and plaques. A study was

conducted in members of Kaiser Foundation Health Plan who had long-standing plaque type of psoriasis unresponsive to several months of treatment. All patients had normal complete blood cell counts and platelet counts and all were above 18 years of age. Nobody had received cytotoxic drugs before and all showed negative patch testing results with 5-FU. Intravenous 5-FU 50 mg/ml was dissolved in water and the pH was adjusted to 9 by addition of sodium hydroxide. A pair of symmetrical comparable plaques either on elbows or knees were chosen. One lesion received 5-FU and the contralateral lesion normal saline solution. All patients were examined weekly during the treatment phase and monthly for follow-up. Out of 11 lesions treated with 5-FU, 9 had a good response, but none had a positive response in the control lesions. Average time required for clearing was about 4 weeks. Of the 9 patients who responded to 5-FU, a remission of about 3 months was maintained without further therapy. Toxic effects were minimal and were limited to local irritation and hyperpigmentation. Mild local erythema and slight tenderness resolved within 1 week. But injections cleared only a small area, average 4 cm in comparison with much larger areas cleared with topical therapy. A more dilute concentration could be equally effective and would allow treatment with larger volumes covering much larger areas. This is the first study conducted about the usefulness of intralesional 5-FU in psoriasis.

Sree Rekha Panicker