ABSTRACTS FROM CURRENT LITERATURE

High prevalence of cervical dysplasia in female consorts of men with genital warts, Hockenstrom T, Jonassen F, Knutsson F et al: Acta Dermato-Venereol (Stockh), 1987; 67 : 511-516.

Fifty-one regular consorts of men with genital warts were examined using colposcopy, vaginal cytology and when needed biopsy also. Abnormal cytological smears were found in 37% compared to 6% in the controls. Premalignant lesions ie atypical condylomata and/or frank dysplasia were found in 27%. There was no difference between consorts with or without external warts. The present study denotes that HPV plays a significant role in the pathogenesis of cervical dysplasia. So a close surveillance of women exposed to HPV infection is warranted, not only for prevention of spread and reinfection but also for further cervical and possibly multifocal ano-genital squamous neoplasia in these women.

Molykutty Francis

Skin changes in patients with amyotrophic lateral sclerosis : Light and electron microscopic observations, Watanabe S, Yamada K, Ono S et al : J Amer Acad Dermatol, 1987; 17 : 1006-1012.

In bed-ridden patients with amyotrophic lateral sclerosis, bed-sores are unknown to develop even at the terminal stages. The skin of these patients showed a delayed relaxation phase. On light microscopy, the collagen bundles in the dermis were seen disoriented, separated and fragmented especially in the papillary dermis. Electron microscopically, extensive deposits of amorphous fine granular material which stained positively with ruthenium red was found in the ground substance and on the surface of collagen fibrils. The degree of cutaneous changes became more apparent as the disease advanced. The authors postulate that the amorphous material acts as a pressure absorber that in turn prevents the occlusion of blood vessels and so the development of bed-sores is prevented.

Molykutty Francis

Circinate eosinophilic dermatosis, Bear WE, Emslie ES and Lanigan S : Internat J Dermatol, 1987; 26 : 192-193.

Cutler was the first to describe the condition known as circinate eosinophilic dermatosis. He suggested parasitic infestation as the actiological factor. The authors report two brothers 18 and 24 years in age respectively who presented with widespread map-like areas on the face, trunk and limbs. The periphery of the lesions showed vesiculation, exudation and scaling. The patients gave a history of atopic eczema which showed exacerbation along with the development of skin lesions. Investigations in both these cases revealed eosinophilia and a high serum IgE level. RAST was positive to cat and dog epithelium in one case and the house-dust mite in the other. The skin tests showed sensitivity to house-dust mite, cat fur, dog hair, straw dust and grasses. So the deterioration of the condition was thought to be related to the purchase of a dog. The condition responded to local and systemic corticosteroids. These cases have features in common with some of those in the literature, but the cases reported previously did not reveal a history suggestive of atopy.

K Anitha

Pruritus as a presenting sign of acquired immune deficiency syndrome (AIDS),Shapiro RS, Samorodin C and Hood AF : J Amer Acad Dermatol, 1987; 16 : 1115-1117.

Pruritus can occur as part of certain skin diseases or it can be a manifestation of some systemic problem. The authors report a 65-year-old man who had intractable pruritus. No cause could be detected by detailed clinical examination or investigations, to account for the same, at that time. One year later, the patient presented with weight loss and increasing fatigability. Oesophago-duodenoscopy revealed infection with *Candida*, cytomegalovirus and *Cryptosporidium*. His T-cell helper/suppressor ratio was reversed and the serum HIV antibody was positive. The patient later succumbed to opportunistic infections. In this case, no other cause for pruritus could be detected other than AIDS. To the best of authors' knowledge, pruritus had not been previously reported as a presenting sign of AIDS. As it is increasingly important to identify the early markers of AIDS, the authors suggest that pruritus can be taken as one of the presenting features of the same.

K Anitha

Azelaic acid, Nazzaroporro M : J Amer Acad Dermatol, 1987; 17 : 1033-1041.

This review is an update on the literature accumulated over the past 10 years following original observation that azelaic acid—a Cq dicoxylic acid, possesses significant biologic properties and a potential as a therapeutic agent. Azelaic acid is a reversible inhibitor of tyrosinase and other oxide-reductases in vitro and that inhibits mitochondrial respiration. Both in vitro and in vivo, it has an antimicrobial effect on both aerobic and anaerobic micro-organisms. In tissue culture, it exerts a dose and time dependent cytotoxic effect on malignant melanocytes, associated with mitochondrial damage and inhibition of DNA synthesis. It can be given in acne topically as well as systemically without any serious side effects. It can also be given in hyperpigmentary disorders like melanoma, post-inflammatory melanoderma, hypermelanosis caused by physical or photochemical agents. Azelaic acid has an inhibitory effect on melanoma cells. Hence, it can be used in lentigo maligna and malignant melanoma. The drug is under evaluation.

Sreerekha Panicker

Solid facial oedema as a complication of acne vulgaris : Treatment with isotretinoin and clofazimine, Helande I and Aho HJ : Acta Dermato-Venereol, 1987; 67 : 535-537.

Persistent solid facial oedema as a complication of acne vulgaris is very rare. The authors report a 20-year-old female who had previous acne vulgaris, but now came with a persistent swelling of the face of 4 months duration. Biopsy revealed a moderately dense perivascular infiltrate consisting of neutrophils and mononulear cells. As the patient did not respond to isotretinoin, chloroquine, prednisolone, tetracycline or clofazimine, she was put on isotretinoin 30 mg daily and clofazimine 100 mg four times a week. She started showing response within 5 months and the drugs were gradually tapered off and stopped, and the patient was given lymph massage. The oedema almost cleared. The second case was also similar in an 18-year-old male who responded well to isotretinoin and the subsequent lymph massage. The pathogenesis of solid facial oedema associated with acne is not known. The improvement of the oedema with isotretinoin and clofazimine, both of which are known to stimulate macrophage function and phagocytosis suggests an immunological mechanism underneath.

K Anitha

Gonococcal infection of the penile median raphe, Quiles DR, Mas IB, Martinez AJ et al : Internat J Dermatol, 1987; 26 : 242-243.

Malformations of the penile median raphe are due to a failure in the fusion mechanisms of the ventral embryonic walls in the median line. Infections of the penile median raphe are rare. The authors report a 25-year-old heterosexual man who presented with a 4-cm long subcutaneous cord-like thickening along the penile median raphe, 4 days after a sexual contact. He had suffered from recurrent attacks of non-gonococcal urethritis in the past. The proximal part of the swelling led to an erythematous papule with a central orifice, draining purulent material from which gonococci were isolated. Even though the discharge subsided following procaine penicillin injection, the linear strand persisted which was confirmed radiologically and histopathologically to be of embryonic origin. The lesion was treated surgically. As in majority of the previously reported cases the lesion became apparent only after the development of a secondary infection, even though it was present right from birth. Also, infections of these malformations by the organisms of non-gonococcal urethritis have not been reported, which indicates an intrinsic difference in the virulence and epithelial affinity between gonococci and the organisms of non-gonococcal urethritis. In this case also there were attacks of non-gonococcal urethritis without involving the dysembryonic canal.

K Anitha

Reactive perforating collagenosis responsive to PUVA, Serrano G, Aliaga A and Lorente M: Internat J Dermatol, 1988; 27 : 118-119.

Reactive perforating collagenosis (RPC), first described by Mehregan et al has no treatment available other than to avoid superficial trauma. Authors report a 21-year-old woman with RPC who responded to PUVA therapy. Clinical and histopathological examination were consistent with RPC. Scratch test produced lesions resembling RPC in normal skin, and unremarkable results obtained with photo-testing. Patient was put on PUVA therapy 4 times a week. Improvement occurred at 2 weeks and no lesions could be elicited by scratch test at the end of therapy. No lesions have been seen in more than a year of post-treatment observation.

N Sasi

***Trichophyton tonsurans* infection in a nine-day-old infant : Manglani PR, Ramanan C, Durairaj P et al, Internat J Dermatol, 1988; 27 : 128.**

Tinea infection in infants has been infrequently reported. Tinea caused by *Microsporum gypseum*, *Trichophyton rubrum* and *Trichophyton mentagrophyte* in very young infants has been reported. The authors report a 9 day-old infant with tinea caused by *Trichophyton tonsurans*. Infection with this organism at such young age has not been reported. Usually prolonged intimate contact is necessary for the spread of the disease; but present case suggests that it is not a must.

N Sasi

Localised unilateral hyperhidrosis, Van De Kerkhof PCM, Den Arend JAJC, Bousema MT et al : Brit J Dermatol, 1987; 117 : 779-782.

A 40-year-old lady had localised hyperhidrosis on the left side of the forehead for 3 years. There was no history of trauma, or symptoms suggestive of a systemic disease. Examination revealed no abnormalities except the well-demarcated hyperhidrotic area. Evaporative water loss measurements revealed a pronounced left right difference. The main causes of unilateral hyperhidrosis include pathological gustatory sweating, peripheral

nerve lesions, extra-facial dysregulation of sweating and partial sympathetic pathway interruption. But in this patient no such abnormalities were detected. So the authors consider this case idiopathic unilateral hyperhidrosis. Authors advise detailed neurological investigation in cases like this, even though hyperhidrosis may be limited to a small circumscribed area.

N Sasi

Autoaggressive hanseniasis, Azulay RD : J Amer Acad Dermatol, 1987; 17 : 1042-1046.

The name autoaggressive hanseniasis was given by the author to a syndrome resembling autoaggressive connective tissue disease both clinically and immunologically. It is characterized clinically by fever and other constitutional features, butterfly erythema and erythema nodosum lesions, infiltrations, necrotising vasculitis, generalised lymphadenopathy, arthritis, nephritis, orchitis, epididymitis, iritis, ureitis and hepatitis. The author has observed several cases like this in which he could demonstrate acid-fast bacilli thus confirming the diagnosis. From the point of immunologic tests one may find lupus erythematosus cells, antinuclear antibodies, rheumatoid factor, antithyroid antibodies, antilipoid antibodies and other non-specific antibodies and high levels of C-reactive protein and immunoglobulins. Treatment consists of thalidomide, clofazimine or corticosteroids along with the specific treatment for hanseniasis.

K Anitha

Cutaneous manifestations of Takayasu's arteritis, Perniciaro CV, Winkelmann RK and Hunder GG : J Amer Acad Dermatol, 1987; 17 : 998-1005.

Takayasu's arteritis is an uncommon vasculitis primarily affecting the aorta and its main branches. Chronic granulomatous vascular inflammation is the predominant feature of the disease with secondary fibrosis and thickening of the vessel walls resulting in end-stage vascular stenoses. The authors have studied 38 cases out of which 21 had cutaneous manifestations. Seven patients had specific skin lesions like pyoderma gangrenosum like ulcer, churg-strauss granuloma and erythema nodosum which were considered to be directly related to the systemic vasculitis. The biopsy specimens from the erythema nodosum lesions did not support the clinical diagnosis but did show arteritis. Fourteen patients showed non-specific lesions such as Raynaud's phenomenon, angioedema, psoriasis etc. Two of the patients included in the study had associated Crohn's disease. Direct immunofluorescence studies performed in two of the three cases showed complement (C_3) or immunoglobulin (IgG, IgM) deposition. Histopathologic study is necessary to categorize the nature of inflammatory leg nodules of these patients.

K Anitha

Disseminated sporotrichosis, Schamroth JM, Grieve TP and Kellen P : Internat J Dermatol, 1988; 27 : 28-30.

The authors report the case of a rare disseminated form of sporotrichosis with extensive cutaneous and systemic lesions. A 56-year-old woman presented with multiple painless nodular lesions with neither a linearity in distribution nor a regional lymphadenopathy, of 3 months duration. Skin biopsy revealed features of sporotrichosis. She was also found to have pulmonary tuberculosis, but all the investigations failed to elicit any evidence of pulmonary or other systemic sporotrichosis. Mantoux test was negative. As the patient was not responding to potassium iodide, oral ketoconazole and intravenous amphotericin B were started along with the antitubercular treatment. As the

lesions had almost cleared, the patient was discharged. She was lost to follow-up but reported again in a moribund state with extensive cutaneous lesions. Again the investigations failed to reveal systemic involvement. Despite intensive treatment, the patient died and the postmortem examination revealed a widespread systemic involvement. This case shows the difficulty in diagnosing systemic sporotrichosis infection. The negative tuberculin test in this case emphasizes that disseminated sporotrichosis is more likely to occur as an opportunistic infection in patients with impaired cellular immunity.

K Anitha

Varicella complicated by staphylococcal scalded skin syndrome with unusual necrosis, Oranje AP, Vuzevski VD, Muntendam J et al : Internat J Dermatol, 1988; 27 : 38-39.

Bacterial infections of the skin in varicella due to excoriation are the most frequent complications. Occurrence of SSSS in the course of varicella is rare. The authors report the case of a 3-year-old girl admitted for chicken-pox who within 2 days developed extensive necrosis of the skin. Histopathology showed diffuse epidermal necrosis and *Staphylococcus aureus* could be cultured from the lesions. The child responded well to antistaphylococcal antibiotics and other supportive measures. The authors have reported this case as it showed an extremely unusually complicated course with large necrotic areas, a complication which has never been reported in the English literature.

K Anitha

Familial generalised perforating granuloma annulare, Abrusci V, Weiss E and Planas G : Internat J Dermatol, 1988; 27 : 126-127.

Granuloma annulare is a benign granulomatous disease of unknown etiology. Familial occurrence of this disease is rare but a few cases have been reported. Perforating granuloma annulare(PGA), a rare clinical variant described by Civatte in 1952, is characterised by asymptomatic, small, firm, grouped papules. There are localised and generalised forms. Authors report a 6-year-old boy and his 5-year-old sister with generalised perforating granuloma annulare. To authors' knowledge, this is the first report of familial PGA in the literature.

N Sasi

Erythema annulare centrifugum caused by hydrochlorothiazide induced interstitial nephritis, Goette DK and Beatrice E : Internat J Dermatol, 1988; 27 : 129-130.

Erythema annulare centrifugum (EAC) is thought to represent a hypersensitivity reaction to a variety of underlying disorders like infections, blood dyscrasias, tumors, certain foods or drugs. However, EAC secondary to thiazide intake is not recorded. Authors report a 50-year-old man who on hydrochlorothiazide for hypertension developed interstitial nephritis and EAC lesions following that. After making the diagnosis of EAC caused by hydrochlorothiazide induced nephritis, the drug was discontinued. The gyrate erythema cleared within eleven days after cessation of medication. Because of the potential for serious renal complications, authors did not rechallenge the patient with hydrochlorothiazide.

N Sasi

Response to minoxidil in severe alopecia areata correlates with T lymphocyte stimulation, Fiedler Weiss VC and Buys CM : Brit J Dermatol, 1987; 117 : 759-763.

There are no clinical or laboratory parameters to predict the outcome of treatment of alopecia areata (AA), except that extensive loss of scalp hairs is least likely to respond. The pathogenesis

of AA is unknown. Degeneration of the follicular bulb and lamellar proliferation of perifollicular fibrous tissues are seen. T lymphocytes appear to be the predominant cell type and may be of pathogenetic significance in the hair-loss process. Changes in T cell population occur after treatment with 5% minoxidil. During treatment, the patient showed a decrease in T cell and increase after stopping it. The purpose of the study was to evaluate lymphocytic blastogenesis in AA patients before and after treatment with minoxidil. Mitogen induced T cell blastogenesis was determined in 47 patients with severe AA before and after treatment with 5% minoxidil and compared with control values. The 36 responders showed significantly increased lymphocyte stimulation with concanavalin A and PHA before treatment which decreased towards control values following hair regrowth. Lymphocytes from non-responders showed no significant differences from controls either before or after treatment. The result suggests that enhanced T cell blastogenesis may predict the response of severe AA to topical 5% minoxidil.

N Sasi

Mitozantrone-induced onycholysis, Speechly-Dick ME and Owen ERTC : The Lancet, 1988; i : 113.

Mitozantrone, an anthracenedione cytotoxic agent, has significant activity for the treatment of patients with breast cancer, non-Hodgkin's lymphoma, hepato-cellular carcinoma and certain leukemias. It has a lower frequency of acute toxicity than related agents such as doxorubicin. The authors report two cases of onycholysis that developed in patients receiving single-agent chemotherapy with mitozantrone for advanced breast cancer. One case had developed onycholysis after six courses of therapy while the other case developed it after eleven courses. The onycholysis was painful and necessitated discontinuation of therapy, which resulted in resolution of the nail changes over several months. All reported cases of onycholysis due to cytotoxic drugs occurred in patients receiving combination chemotherapy and doxorubicin was the common component of all these regimens. Both doxorubicin and mitozantrone cause alopecia in a significant number of patients. The authors contend that because of the developmental similarity between hair and nails it is perhaps surprising that onycholysis due to mitozantrone has not been previously reported.

Jayakar Thomas

Use of routine viral cultures at delivery to identify neonates exposed to herpes simplex virus, Prober CG, Hensleigh PA, Boucher FD et al : New Eng J Med, 1988; 318 : 887-891.

The authors obtained specimens for viral culture from mothers, infants, or both at the time of 6904 deliveries, irrespective to the mothers' history of genital herpes. Herpes simplex virus (HSV) was recovered in cultured specimens from 14 of the 6904 deliveries (0.2%); all the 14 mothers were asymptomatic. All viral isolates were herpes simplex virus type 2 (HSV-2). Only 1 of the 14 women (7%) had a history of genital herpes, whereas 12 (86%) had serologic evidence of a previous infection with HSV-2. None of the infants born to these 12 women contracted neonatal herpes. However, one of the two infants born to women with serologic evidence of a primary HSV infection at the time of delivery contracted neonatal herpes. The findings show that most infants at risk of exposure to HSV at delivery will not be identified if concern about asymptomatic shedding of virus is limited to women with a history of genital herpes infection. Most neonatal exposure to an asymptomatic maternal HSV infection at delivery is not predictable or preventable. Therefore, physicians caring for newborns need to consider neonatal herpes in the differential diagnosis when infants become

ill during the first weeks of life, regardless of the presence or absence of identifiable risk factors for HSV infection.

Jayakar Thomas

Scleromyxedema : A scleroderma-like disorder with systemic manifestations, Gabriel SE, Perry HO, Oleson GB et al : Medicine, 1988; 67 : 58-65.

Scleromyxedema is a rare fibro-mucinous connective tissue disorder characterised by papular skin lesions associated with sclerosis and a serum monoclonal gammopathy. Little is known about either the natural history or the systemic manifestations of this disease. The authors reviewed the medical records of 19 patients with biopsy-proved scleromyxedema seen from 1950 to 1985 for evidence of systemic disease. There were 10 males and 9 females with a median age-at-diagnosis of 53 years. Monoclonal gammopathy was present in 13 patients. Eight patients complained of dysphagia, 5 patients of proximal muscle weakness, 6 patients of dyspnoea, 1 patient of Raynaud's phenomenon and 1 had arthralgia. Pathological changes characteristic of "scleroderma kidney" were demonstrated in 1 patient. Although 8 of 12 patients treated with melphalan noted regression of their skin changes, no consistent improvement in the extra-cutaneous manifestations was demonstrated. Authors concluded that systemic manifestations in scleromyxedema are more prevalent than previously recognised and can resemble those of scleroderma. Lack of definitive data regarding the natural history of this disease complicates the question of optimal therapy, but the use of alkylating agents should be reserved for those patients with severe debilitating skin disease.

Jayakar Thomas

Histologic characteristics of lichen planus transplanted onto nude mice and cultured in vitro, Tammi R, Hyyrylainen A and Fraki JE : Arch Dermatol Res, 1988; 280 : 23-28.

Despite characteristic clinical and histopathological features, the aetiology of lichen planus (LP) is unclear. Various factors including infections and immunological reactions resembling graft-versus-host reactions have been suggested. The present study was carried out to find out the influence of host factors in the pathogenesis of lichen planus lesions by transplanting affected lesional skin from LP patients onto mice. Cultured skin samples were obtained from the typical, confluent, active and histopathologically varified lesions of LP on the legs or forearm of 8 patients. Explants of about one cm diameter were transplanted over the upper back of young adult KUO : NMRI nude (nu/nu) mice of both sexes, after removing skin flaps of the same diameter from there. These explanted grafts were removed 6 weeks later after killing the mice. Simultaneously, skin explants of 2 mm diameter, prepared from the involved LP skin were cultured in organ culture under chemically defined conditions at 37°C and samples were taken on the 3rd, 5th and 7th day of the culture. The morphometric analysis and light and electron microscopic studies of the samples showed a more uniform epidermis with a normally thick stratum granulosum, normalized dermo-epidermal interface, absence of degenerating cells and colloid bodies in the basal cell layer and disappearance of dermal mononuclear infiltrate. The disappearance of granular cells and the formation of a necrotic cell layer in the upper epidermis were the most obvious changes in the cultured samples. Dermal cells were reduced to about 50% in both transplanted and cultured samples. Active LP lesions were still present in the donor patients after 6 weeks. This observation supports the hypothesis that the host factors, probably the intense dermal mononuclear cell infiltrate of the LP lesions or other

humoral factors are responsible for the destructive changes in the epidermal basal cells seen in lichen planus.

Pramod K Nigam

Clinical correlations and prognosis based on serum autoantibodies in patients with systemic sclerosis, Steen VD, Powell DL and Medsger TA : Arth Rheum, 1988; 31 : 196-203.

The clinical spectrum of systemic sclerosis (Scleroderma) ranges from limited scleroderma restricted to fingers, hands, and/or face (CREST syndrome) at one end, to diffuse, widespread and often progressive with relatively early visceral complications at the other end. Recently, two relatively specific antibodies, the anti-Scl-70 antibody, more frequently present in patients with classic diffuse scleroderma, and the anti centromere antibody (ACA), in association with limited scleroderma, have been identified. In the present study, 397 systemic sclerosis patients, 191 of limited scleroderma and 206 with diffuse scleroderma were investigated and clinically correlated with the presence of antibody type. Eighty six (22%) patients were ACA positive, 102 (26%) patients were anti-Scl-70 positive and 209 (53%) patients had neither of these antibodies. None had both the antibodies simultaneously. ACA was present in 43% patients with limited scleroderma as compared to 1% patients with diffuse scleroderma. Whereas anti-Scl-70 antibody was present in 33% of the diffuse scleroderma patients while only 18% of the limited scleroderma patients had it. ACA positive patients had a significant female preponderance, significantly higher age at onset of systemic sclerosis, and a higher frequency of calcinosis and telangiectasia. Anti-Scl-70 antibody was associated with more frequent digital pitting scars and a higher total skin score. Heart, lung, kidney and musculo-skeletal system were significantly more frequently involved in anti-Scl-70 positive patients as compared to ACA positive patients. Only 50% of ACA positive patients had ANA, all with speckled pattern, while all patients with anti-Scl-70 had ANA with 95% having speckled pattern and 5% with both nucleolar and speckled staining. Among the 209 patients having neither ACA nor anti-Scl-70, the ANA was present in 113 (54%) patients, of which 90 (80%) had a speckled pattern while 23 (20%) had nucleolar pattern. The ACA was significantly associated with HLA-DR5. The cumulative survival rates were almost identical in all the 3 groups. The authors summarize that the determination of scleroderma specific antibodies permit a high degree of certainty in diagnosis as well as in determining the scleroderma subtype.

Pramod K Nigam

Erythema multiforme in a pregnancy resulting from in vitro fertilization, Nelson M, Confino E, Friberg J et al : J Reprod Med,1988; 33 : 230-231.

Various factors such as infections, drugs, chemicals, physical trauma etc are known to precipitate erythema multiforme (EM). Several cases of EM have occurred during pregnancy, mainly during the 2nd and 3rd trimesters. The authors report a 32-year-old female with bilateral tubal obstruction who conceived after in vitro fertilization and embryo transfer and was put on daily intra-muscular injections of progesterone in oil. At 12 weeks of gestation she developed pruritic, maculo-papular rash on the extensor surfaces of her extremities with congestion of conjunctivae. The histopathologic and immunofluorescence findings of the lesion were consistent with EM minor. Progesterone was discontinued. The lesions gradually subsided with 60 mg/day of predinsolone. Although progesterone and its solvents such as peanut oil, benzyl benzoate and phenol may all cause EM, a possibility which could not be ruled out, the case is of interest as this is the first case of EM associated with a pregnancy resulting from in vitro fertilization.

Pramod K Nigam

Syndrome of erythroderma, failure to thrive and diarrhoea in infancy : a manifestation of immunodeficiency, Glover MT, Atherton DJ and Levinsky RJ : Paediatrics, 1988; 81 : 66-72.

Erythroderma, failure to thrive and diarrhoea is a well recognized syndrome associated with a high mortality. The authors report 5 infants with this triad of symptoms, all of them showing significant immunologic abnormalities reflecting immunodeficiency. The nature of the immunodeficiency appears to be different in every case. Three of their patients showed markedly elevated serum IgE levels with impaired neutrophilic motility. One patient showed persistent hypogammaglobulinemia while one had an unusual form of combined immunodeficiency. The yeast opsonization for phagocytosis by neutrophils was normal. The authors suggest that the syndrome results from abnormal immunologic responses, either to common environmental antigens or to infective agents, occurring in an immunodeficient host. Early recognition and prompt treatment of the underlying immunodeficiency may reduce the mortality and morbidity associated with this disease.

Pramod K Nigam