

## ABSTRACTS FROM CURRENT LITERATURE

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**Scleroderma after occupational exposure to trichlorethylene and trichlorethane, Flindt-Hansen H and Isager H : Acta Dermato-Venereol(Stockh), 1987; 67 : 263-264.**

It is well known that scleroderma-like disease can occur after exposure to vinyl chloride monomer and to vapour of epoxy resin. Here the authors describe 3 cases of scleroderma which developed after occupational exposure to trichlorethylene and trichlorethane. All of them developed the disease after prolonged and intensive exposure to these chemicals in connection with cleaning of metal. This observation raises the question whether exposure to these widely used chlorohydrocarbon solvents may be an aetiological factor in clinical syndromes within the spectrum of systemic sclerosis.

**K Pavithran**

**Erythema nodosum and pulmonary solitary nodule as the first manifestation of a non-Hodgkin's lymphoma, Reverter JC, Coca A, Font J et al : Brit J Dis Chest, 1987; 81 : 397-399.**

Erythema nodosum is a well-recognized reaction of the skin to a variety of systemic diseases. Its association with non-Hodgkin's lymphoma is very uncommon. Here the authors report a 61-year-old woman who presented with erythema nodosum of the legs and arms, arthritis of knees and enlargement of right axillary lymph node. Biopsy of the skin nodule showed histopathological features of erythema nodosum. Chest roentgenograms showed a solitary pulmonary nodule in the anterior segment of the right upper lobe. A thoracic CT scan confirmed the presence of a right parenchymal nodule. The pulmonary lesion was removed through a right thoracotomy and the axillary lymph node was

also excised. Histopathological study of both the specimens showed a centrocytic-centroblastic lymphoma.

The unusual features in this case are, (1) pulmonary metastasis which, though extensively documented in Hodgkin's lymphoma, is rare in non-Hodgkin's lymphoma, and (2) erythema nodosum appearing as a manifestation of non-Hodgkin's lymphoma.

**K Pavithran**

**Cutaneous mastocytosis with bleeding : probable heparin effect, Smith TF, Welch TR, Allen JB et al : Cutis, 1987; 39 : 241-244.**

Mast cell disorder may occur solely as a cutaneous disease or as a systemic disease with or without cutaneous involvement. Here an infant boy is reported with diffuse cutaneous mastocytosis. He developed recurrent attacks of severe gastro-intestinal bleeding. Each attack was preceded by the formation of haemorrhagic bullae on the skin. Detailed investigations did not show any specific lesion of mastocytosis in the upper or lower gastro-intestinal tract to account for the bleeding. During each attack the coagulation time was prolonged and correction of his thrombin time with reptilase treatment suggested that the observed alterations were related to circulating heparin or a substance similar to heparin. This was substantiated by the correction of the abnormalities by protamine sulfate, a specific heparin antagonist. Author suggests that in this child, degranulation of the mast cells in the skin resulted in gastro-intestinal bleeding by the dual actions of heparin producing anticoagulation and histamine producing increased vascular permeability. Amelioration of the symptoms as his age advanced is attributed to

the alteration in the releasability of mediators from mast cells that occurred spontaneously over time.

**K Pavithran**

**Presternal swelling in mumps, Garty B, Danon YL and Nitzan M : *Cutis*, 1987; 39 : 149-150.**

Mumps is a common viral disease in children and affects the salivary glands. Rarely, infection may involve the testes, pancreas and meninges. A less common manifestation of mumps, always related to the salivary gland enlargement is presternal swelling or oedema. Such a presentation of mumps is reported here in a 6-year-old boy. The child had fever and swelling of both the parotid and submandibular glands. The orifice of Stensen's duct was prominent and erythematous bilaterally. There was a symmetrical swelling of the presternal tissue with obliteration of the supra-sternal notch. It extended from the base of the mouth to the third intercoastal space and laterally to the mid-clavicular lines. The swelling was erythematous, warm and tender. Even without any treatment, the swellings of the parotid and submandibular glands subsided in 2 days. The presternal swelling also subsided on the third day.

The presternal swelling in mumps is attributed to obstruction of the lymphatic drainage from the anterior-superior chest wall by the cervical salivary gland enlargement. Rarely, it may result in dysphagia and hoarseness. The main significance of this finding is to differentiate it from cellulitis of the presternal tissue.

**K Pavithran**

**Basal keratinocyte herniation, Kanerva L : *Acta Dermato-Venerol (Stockh)*, 1987; 67 : 254-257.**

Protrusion of basal keratinocyte processes has already been reported to occur in psoriasis,

Darier's disease and epithelial tumours. Here the author reports such a phenomenon in a variety of diseases; such as psoriasis, circinate balanitis, pityriasis rubra pilaris, patch tests, gold dermatitis and conjunctivitis. Short to moderately long processes were seen under electron microscopy to protrude through a basal lamina gap. These processes had the same electron density as the parent basal keratinocyte and they contained microtubuli. Basal keratinocyte herniations associated with cells crossing the basal lamina have also been observed by the author in disorders like irritant patch tests. He believes that when the basal lamina is broken, as is frequently seen in inflammatory disorders with invasion of leucocytes into the epidermis, keratinocyte herniation can occur. It has been suggested that these cytoplasmic processes may be a stimulus for cell proliferation as in psoriasis. In epithelial tumours it might represent an invasion mechanism in the preliminary stages of tumour growth.

**K Pavithran**

**Condyloma latum mimicking keratoacanthoma in patient with secondary syphilis, Tham SN and Lee CT : *Genitourin Med*, 1987; 63 : 339-340.**

Cutaneous lesions of secondary syphilis may mimic many other dermatological disorders. Here, the authors report a 31-year-old Chinese man who presented with a dome-shaped granular tumour of the umbilicus of 3 weeks duration. There was a central crateriform ulcer on top of the lesion and this suggested a clinical diagnosis of infected keratoacanthoma. But histopathological study of the lesion revealed features of condyloma lata and later a retrospective diagnosis of secondary syphilis was made. His blood VDRL test was strongly positive. The FTA-ABS test on the sample of serum also gave a positive result. Umbilicus is a moist and occluded site and should therefore be included in the list of known sites of predilection for

condyloma lata. Authors state that biopsy samples should be taken from lesions like keratoacanthomas occurring at unusual sites.

**K Pavithran**

**The skin changes of POEMS syndrome, Ishikawa O, Niher Y and Ishikawa H : Brit J Dermatol, 1987; 117 : 523-526.**

POEMS syndrome is a multi-system disorder characterized by polyneuropathy, organomegaly, endocrinopathy, the presence of monoclonal protein and skin changes. Here the authors report a case of POEMS syndrome in a 68-year-old female who had many cutaneous manifestations. She had Raynaud's phenomenon, hyperpigmentation, hypertrichosis and oedema of the lower legs. There was associated proximal scleroderma with sclerodactyly, diffuse hyperpigmentation over the whole body and shortening of the lingual frenulum. There were multiple dark-red nodules on the trunk and occipital region of the scalp. Histopathologically these nodules were identified as haemangiomas. There was proliferation of immature non-specific acid phosphatase-positive endothelial cells with erythrophagocytosis and this suggested cellular changes rather similar to Kaposi's sarcoma, POEMS syndrome might be considered to be a connective tissue syndrome characterized by cutaneous vascular proliferation in addition to endocrine abnormalities and with immunological disturbances possibly leading to the development of polyneuropathy.

**K Pavithran**

**Understanding leukotrienes, Wardle N : J Appl Med, 1987; 13 : 417-420.**

The leukotrienes of white cells are powerful pharmacological mediators that are implicated in many immunological reactions. The most powerful effects are seen in asthma. The circulatory effects are local except perhaps in endotoxin

shock. Currently, there is no safe therapeutic inhibitor of leukotriene formation. Benoxaprofen which so many rheumatoids found beneficial, was thought to have such an action. In view of many actions of leukotrienes, potential inhibitors would be of value for psoriasis, arthritides, inflammatory bowel disease and asthma. A variety of experimental manipulations that shed light on the problem can be cited. The agent nafazotrom known for its potential in increasing prostacyclin formation has been shown to inhibit the formation of  $LTB_4$  by human neutrophils in a dose-dependent manner. When rat peritoneal cells are stimulated by an ionophore they produce leukotrienes. The seleno-organic compound ebselen causes inhibition of 5 HETE and  $LTB_4$  formation and thus it might inhibit the lipooxygenase reaction. It is known that lipooxygenase inhibitors such as nafazotrom or norfihydroxyguiretic acid inhibit the formation of granulomas by macrophages. In fact the HETEs augment the actions of lymphokines and promote granuloma formation. Hydroxychloroquine used to control sarcoid granulomas, and sulfasalazine used in ulcerative colitis are being used for their lipooxygenase inhibitory action. Sulfasalazine inhibits the formation of leukotrienes and thus it appears that 5-aminosalicylate might be a lipooxygenase inhibitor. Certainly it is a cyclo-oxygenase inhibitor. The antifilarial compound diethyl carbamazepine has now been found to be an inhibitor of the synthesis of peptido-leukotrienes that mediate asthma. Its action is even more effective when used experimentally in conjunction with a 5-lipooxygenase inhibitor called piriprost. Ketoconazole inhibits 5-lipooxygenase. Thus, it inhibits neutrophil chemotaxis and bronchoconstriction in guinea pigs. It does not affect platelets. There is a subtle way of manipulating leukotriene formation namely by altering the fatty acid constitution of the diet. By feeding a fish diet that is rich in eicosapentaenoic acid  $LTB_5$  is formed instead of  $LTB_4$ . The result is that chemotaxis and neutrophil activation are

diminished. It has already been claimed that this approach benefits people with rheumatoid arthritis. Inflammatory exudate can be suppressed by EFA rich diet. Clearly there is a hope that lipooxygenase inhibitors will be discovered for use in therapeutics.

**Sree Rekha Panicker**

**The new quinolones, Wise R : J Appl Med, 1987; 13 : 49.**

The first quinolone is nalidixic acid. This compound reaches poor levels in blood; it is concentrated in urine and so can be used for urinary tract infections. The new quinolones also reach low levels in blood, but are many times more active than nalidixic acid and so may be used in systemic infections. The compounds under development in Europe are norfloxacin, enoxacin, ofloxacin, pefloxacin and ciprofloxacin which are oral agents. Intravenous ciprofloxacin, inoxacin and perfloxacin are being studied. The new quinolones have been studied for skin and soft tissue infections. They have high activity against *Neisseria gonorrhoeae* but they are not sufficiently active against *Chlamydiae* which are implicated in non-specific urethritis. High activity against Gram negative rods suggests the use of quinolones in severe Gram negative sepsis. The quinolones are rapidly bactericidal, they inhibit the closing step allowing open strands of bacterial DNA to form which are then destroyed by the endonuclease in the cell. The quinolones are absorbed from the gastro-intestinal tract to varying degrees. The drugs distribute themselves very widely in the body and reach many tissues. Good penetration is achieved in sputum and CSF. All quinolones except ofloxacin are metabolised in moderate degree and are excreted in urine. Their high urine levels make it very likely that these compounds are important in the treatment of urinary tract infections. Adverse effects do not appear to be a major problem. The quinolones are

deposited in growing cartilage and they should not be used in children or in pregnancy. Resistance is not a problem with quinolones because infections or plasmid mediated resistance is very unlikely to occur. As the quinolones have a wide spectrum of activity than nalidixic acid, which encompasses *Pseudomonas*, *Streptococcus*, *Staphylococcus*, *Neisseria* and common Gram negative bacilli, in the near future even more quinolones are likely to be investigated.

**Sree Rekha Panicker**

**Pseudouridine excretion in patients with psoriasis, Clemmensen OJ, Kieffer M and Sjolín K : Acta Dermato-Venerol (Stockh), 1987; 67 : 310-314.**

Pseudouridine (5 ribosyl-uracil) is a normal small component of t-RNA and is excreted through the kidneys. It reflects the catabolism of t-RNA. In seventeen patients with psoriasis, pseudouridine excretion was found to be significantly increased, more so in patients with psoriatic arthritis, but unrelated to the extent of psoriatic skin lesions. In ten patients who were treated with anthralin, PUVA, pseudouridine excretion decreased significantly during therapy. A persistently increased pseudouridine excretion irrespective of clearing of the skin lesions may indicate the need for prolonged therapy in order to prevent exacerbations. The possibility of monitoring the disease activity by estimation of pseudouridine is also discussed.

**Mollykutty Francis**

**Role of circulating immune complexes in human secondary syphilis, Jorizzo JL, Mc Neely MC, Baughn RE et al : J Infect Dis, 1987; 153 : 1014-1022.**

All the 9 adult subjects with early secondary syphilis showed circulating immune complexes (CICs) on Clq-binding on Raji cell assays. Immunoreactants (IgG, C3 and/or Clq) were demonstrated in dermal blood vessels from early

lesional or histamine injected skin in six patients. The neutrophilic vascular reaction consistent with CIC mediated vessel damage was seen in early lesional or histamine injected skin in seven patients. *Treponema pallidum* specific antigen was detected in lesional or histamine injected skin by radio-immunoblot technique in six patients. The normal controls did not show these changes. These findings support the role of CICs containing *Treponema pallidum* specific protein in the pathogenesis of human secondary syphilis.

Mollykutty Francis

**Evidence for spirochaetal origin of circumscribed scleroderma (morphoea), Aberer A, Stanek G, Ertl M et al : Acta Dermato-Venerol (Stockh), 1987; 67 : 225-231.**

Antibodies to *Borrelia burgdorferi* were detected in eight out of fifteen patients with morphoea. Six of them had IgG antibodies and two had both IgG and IgM antibodies. Some of these patients were treated with high doses of penicillin previously. The spirochaete could be cultured in Barbour-Steonner-Kelly's medium in one sero-positive untreated patient. Spirochaetes were detected in histopathological sections in two sero-positive and one seronegative morphoea. The authors conclude that morphoea may represent a *Borrelia* infection and the collagen alteration in morphoea might be induced by the persistent interleukin 1 released from mononuclear cells by the presence of spirochaetes or their antigen. The similarities between acrodermatitis chronica atrophicans and morphoea are also discussed.

Mollykutty Francis

**Methotrexate treatment of psoriatic arthritis, Zachariae H and Zachariae E, Acta Dermato-Venerol (Stockh), 1987; 67 : 270-273.**

Twenty eight patients with psoriatic arthritis were put on methotrexate 5 mg 12-hourly, three

doses every week. Clinical assessment was done before starting therapy as well as after three months, six months and twelve months. All patients improved dramatically with regard to pain and function. Improvement began 2-6 weeks after institution of therapy. Except for a transient rise in serum transaminase, no other untoward effects were noted during therapy.

Mercy Paul

**A new contact sensitizer diphencyprone, in the treatment of alopecia areata, Mac Donald-Hull SP and Norris JFB : Brit J Dermatol, 1987; 117 (Suppl) : 22.**

Thirty five patients with alopecia areata were given diphencyprone for topical application. Two of them were unable to tolerate the drug while six stopped treatment after 14 weeks, since there was no hair regrowth. Of the rest, 33% had alopecia areata and 67% had alopecia universalis or alopecia totalis. 89% of those with alopecia areata and 44% of those with alopecia universalis or totalis had hair regrowth, after a mean duration of 16 weeks. No correlation with the patients' age or duration of alopecia and hair regrowth was observed.

Mercy Paul

**Familial benign chronic pemphigus, Hernandez-Perez E, Salvador S and Salvador E : Cutis, 1987; 39 : 75-77.**

Familial benign chronic pemphigus (FBCP) is an autosomal dominant geno-dermatosis with irregular penetration. The epidermis reacts to actinic, thermal, chemical and mechanical stimuli with suprabasal acantholysis. A genetic defect in the desmosome tonofilament complex results in acantholysis. Two most common morphologic appearances are described as, (1) an intertrigo resembling candidiasis in which Nikolsky's sign is positive, and (2) plaques with elevated, hard, lichenoid, circinate edges with clean centres simulating tinea corporis. Light

microscopic and ultrastructural features are discussed along with reports of three cases of FBCP showing both the clinical variants.

**N Surendran Pillai**

**Alopecia areata, endocrine function, and autoantibodies in patients 16 years of age or younger, Milgraum SS, Mitchell AJ, Bacon GE et al : J Amer Acad Dermatol; 1987; 17 : 57-61.**

The association between alopecia areata, related endocrine diseases and autoimmunity has been well documented. Forty five patients 16 years or younger with alopecia areata were studied by means of clinical and laboratory evaluation for evidence of endocrine diseases and autoantibodies. Eleven (24%) patients had an abnormality of thyroid function although clinically most appeared normal. Of the 44 children tested for autoantibodies smooth muscle antibody was present in 7, and parietal cell antibody was present in 2 patients. The authors believe it prudent to perform thyroid function tests routinely for all patients with alopecia areata, including those with only minimal localised disease.

**N Surendran Pillai**

**Plasma somatomedin-C levels in psoriasis, Nickoloff BJ, Misra P, Morhenn VB et al : Brit J Dermatol, 1987; 16 : 15-20.**

Human growth hormone is suggested as one of the endocrinological factors for the aetiology and pathogenesis of psoriasis. Previously it was reported that the severity of psoriatic lesions is parallel with the increase in serum human growth hormone production, somatostatin and bromo-

criptin. Human growth hormone has diurnal variation whereas somatomedin, a growth hormone dependent insulin like factor, shows little diurnal variation. Keratinocytes have high affinity receptors for somatomedin. So authors measured somatomedin-C in twenty five patients and found that plasma levels are not elevated. They suggested that somatomedin-C is produced from the dermal fibroblast. This may stimulate keratinocyte proliferation.

**K Sobhana Kumari**

**Venereal trichomoniasis : role of man, Longley JG, Goldsmidt JM and Davies M : Genitourin Med, 1987; 63 : 264-267.**

Man is a short-term vector for *Trichomonas vaginalis* whereas bull is the reservoir and vector for *Trichomonas foetus*. To find out the obvious differences authors studied cultures of *Trichomonas vaginalis* and *Trichomonas foetus*, prostatic secretions, seminal fluid, their zinc concentrations and maximum trichomonacide concentration of inorganic salts. Zinc killed the organism in vitro whereas magnesium salt solutions did not have any effect. Minimum trichomonacidal concentration was 200 m mol/L of zinc for the bovine trichomonad whereas *Trichomonas vaginalis* was killed by 6.4 m mol/L. Human prostatic samples have zinc concentration of 2.3-15.3 m mol/L but seminal fluid had much lower zinc. Yet *Trichomonas vaginalis* can be killed by these fluids. No such phenomenon was seen in *Trichomonas foetus*. Neither a zinc dependent nor an alternate anti-trichomonad system is present in bulls.

**K Sobhana Kumari**