Generalized Lymphadenopathy, Pyoderma Gangrenosum - Like Lesions And Papulonecrotic Tuberculids - Different Modes Of Presentation Of Tuberculosis A Case Report

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A case of young girl presented with generalized lymphadenopathy, ulcerative lesions on the ankles and papulonecrotic eruption on her elbows & knees. Cutaneous and lymph node biopsy confirmed her, a case of tuberculosis. She responded to conventional antituberculous treatment.

Key Words : lymphadenopathy, papulonecrotic eruption ,antituberculous treatment

The term "Mycobacterium" was given in 1896 to large group of bacteria, producing mould - like pellicles when grown on liquid media. They are slender, non-motile, aerobic, non-sporing, acid - fast rods. These are resistant to many bactericidal agents[1].

The mycobacteria are a large genus which include important pathogens of man and other vertebrates. The most important obligate human pathogens are M. Tuberculosis and M. Leprae. Runyon grouped mycobacteria by their ability to produce a yellow pigment in the dark or only in the light & by their rate of growth.

The mammalian tubercle bacilli are divided into four recognized species: M. tuberculosis, M. Bovis, M. Africanum & M. microti. The techniques of molecular biology are now making it possible to identify different species rapidly by using nucleic acid probes to recognize specific DNA or RNA base sequences[2].

The organism responsible for tuberculosis was identified over 100 years ago, diagnostic skin tests were developed about 100 years ago; a tuberculosis vaccine has been in use for over 60 years, and chemotherapy for over 30 years. Despite all of these facts, tuberculosis remains a huge international health problem[3].

Case Report

A young girl of 20 years was admitted in Dermatology Department, Mayo Hospital, Lahore in October, 1995 for generalized lymphadenopathy, ulcerative lesions on her ankles & papulonecrotic lesions on her elbows & knees of two years duration.

Clinical examination revealed generalized painless lymphadenopathy (1-2 cm in size). The lymph nodes were matted together & over lying skin was normal. There were multiple indolent ulcers of 3-4 cm with bluish undermined edges present around her both ankles. There was a symmetric eruption of dusky red, symptomless, pea-sized narcotizing papules affecting the elbows & knees. Rest of the general & systemic examination was normal.

She was investigated for her symptoms. Blood examination revealed normal Hb, TLC, DLC, urea, sugar, bilirubin & SGPT. X-ray chest was clear. Following investigations were abnormal: ESR (47 mm), S. Alkaline Phosphatase (246 i.u.), Ig G (3259 i.u) & IgE (370 i-u). Mantoux test was negative. Skin biopsy of ulcertaive lesion was interpreted as vasculitis. Lymph node biopsy could not be done because of her refusal.

She was diagnosed as immune - complex vasculitis. She was put on tablet betamethasone (2mg/day) which was stopped after 15 days (by some Physician) & Imuran (100 mg on alternate days) was started.

Her cutaneous lesions healed completely within 3 months. Treatment was stopped after one & half years. She remained well while on therapy but her ESR remained continuously high. Papulonodular lesions on elbows & knees reappeared after 3 months of discontinuation of therapy. She also developed arthralgia in various joints.

She was re-investigated in October, 1997. ESR was 60 mm & mantoux test was strongly positive X-Ray chest & hands were normal. ANA, Rheumatoid factors & anti-double stranded DNA antibodies were negative. Skin biopsy of papular lesion showed large control zone of coagulation necrosis, surrounded by histiocytic palisade, similar to that of granuloma annular. There was perivascular lymphocytic infiltrate present. Her cervical lymph node biopsy revealed "epitheloid granuloma with Langhan type of giant cells and areas of caseation necrosis".

Final diagnosis of tuberculous lymphadenitis & papulonecrotic tuberculids was made. She responded well to the conventional ATT. She was followed up for 6 months Her cutaneous eruption disappeared by leaving small pigmented scars. The size of the lymph nodes was markedly decreased. Her appetite was improved & she gained weight. She was lost to following up after 6 months.

Discussion

The world wide prevalence tuberculosis is estimated to be 1.7 billion and 8 million new cases of both pulmonary and non pulmonary tuberculosis occur yearly with 2.9 million deaths. The highest proportion of infected patients are in the developing countries. The tuberculosis of the skin has a world wide distribution. In European & North American Countries, the incidence of skin tuberculosis has shown a steady decline over the past years. In times of crisis, e.g., after the two world wars, certain forms of skin tuberculosis occurred more frequently. Malnutrition & breakdown in normal living conditions may well explain this temporary resurgence. An increase in mycobacterial infections has occurred with the advent of the AIDS epidemic[4].

The two most frequent forms of cutaneous tuberculosis are lupus vulgaris & scrofuloderma. Generalized miliary tuberculosis is seen in infants & adults with severe immunosuppression or AIDS. Scrofuloderma usually occurs in adolescents and elderly but lupus vulgaris may affect all age groups.

Tuberculids were originally considered to represent a recurrent disseminated or systemic skin reaction to toxins of tubercle bacilli, with a tendency to spontaneous involution. As a rule, bacteria cannot be demonstrated in these lesions. In many cases, a single acid fast rod may be seen but usually the tuberculin test in positive.

In earlier writings the association of papulonecrotic tuberculids with tuberculous lymph nodes of internal organs has been stressed.

In the series of Morrison & Fourie, a deep focus of tuberculosis, most commonly cervical lymphadenopathy, some with scrofloderma, was found in one third of cases[5]. They believe the bacilli from a tuberculous focus periodically enter the circulation, where they are opsonized, settle out, preferentially in skin capillaries and the papulonecrotic tuberculids represents an Arthus - like reaction followed by a developed hypersensitivity response to mycobacteria. Anticomplimentary activity and in vivo C3 conversion observed in five patients indicate the presence of immune complexes. A prompt response to anti-tuberculous therapy has be described by Morrison & Fourie[5].

An association with discoid lupus erythematosis, arthritis or erythema nodosum has also been observed in patients with papulonecrotic tuberculids.

This case deserves reporting as it demonstrates the different modes of presentation of tuberculosis and this may help clinicians in accurate diagnosis & appropriate treatment of the disease in future.

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