

Title : LICHEN SCROFULOSORUM : A CASE REPORT

Author : *Dr. Supriya Radhakrishna Vikhe, ** Dr. Ramesh Gosavi, ***Dr. Nishad Patil, ****Dr. Sunil Mhaske

*Post Graduate Student, Department of Dermatology
** Professor & Head of the Department, Dept of Dermatology, ***Post Graduate Student, Dept of Paediatrics, ****Professor and Head of Department, Dept of Paediatrics.

Address for Correspondence : Padmashree Dr. Vithalrao Vikhe Patil Medical College, Ahmednagar.

Abstract-

Lichen scrofulosorum (LS) is a rare tuberculid seen in children and young adults with underlying tuberculosis. We describe a patient with rare skin manifestations and simultaneous pulmonary tuberculosis. This 9 year old male child had suffered from productive cough for 1 month, with characteristic LS rashes were noted over abdomen, back and buttocks 15 days prior to admission to our hospital. Chest roentgenography showed prominent bronchovascular markings over both lung field, and sputum culture yielded Mycobacterium tuberculosis complex. LS was diagnosed using the skin biopsy results and the papules healed with dystigmentation after antituberculous therapy.

Key word : Lichen scrofulosorum, Tuberculid, pulmonary tuberculosis

Introduction : Lichen scrofulosorum (LS) also known as tuberculosis (TB) cutis lichenoides, is a rare tuberculid that presents as a lichenoid eruption of minute papules in children and adolescents with TB. The lesions are usually asymptomatic, closely grouped, skin-colored to reddish-brown papules, often perifollicular, and are mainly found on the abdomen, chest, back, and proximal parts of the limbs. The eruption is usually associated with a strongly positive tuberculin reaction.^[1]

Tuberculosis is an important global health problem. It infects one third of the world's population (1.86 billion people), causes 8 million new cases annually, and is responsible for 1.9 million deaths per year.^[2,3] Although typically manifested as chronic pneumonia, 15% to

20% of all tuberculosis cases present in an extra pulmonary form. Cutaneous tuberculosis is relatively rare and makes up approximately 1% of all cases of extra pulmonary tuberculosis.^[4]

Tuberculosis (TB) remains a major public health problem in India with varying pulmonary and extra pulmonary manifestations. Cutaneous TB accounts for 1-2% cases of extra pulmonary TB in children^[2].

Scrofuloderma and lupus vulgaris are two most common forms of cutaneous TB^[3].

Tuberculid are rare cutaneous manifestations of tuberculosis due to delayed type of hypersensitivity reaction to tubercular bacilli and characteristically do not contain acid fast bacilli (AFB). Lichen scrofulosorum is a rare form of true tuberculid, often serves as an important marker of occult tuberculosis in children^[4].

Recently, cases of LS have been reported from India in dermatology literature^[5]. However, there is paucity of similar type of reports in pediatrics literature.

Case summary : A 9 years male child admitted to us for the complaints of intermittent type of fever and coughs which is productive since 1 month; child also had multiple asymptomatic skin lesion have history of weight loss, & decreased appetite. Child is immunized up to age with BCG scar on left deltoid.

Child is 2nd product of non-consanguineous marriage (1st girl child of 14 years and 3rd is male child of 7 years of age).

Child was weighing 16.41 kg with height of 120 cms. On examination there were redish brown papular, perifollicular in nature over back, buttocks and over lower limb.

Following investigation done :

- Hb- 7.1 gm
- TLC- 4700 cells /cmm
- N-47, L-43, E-2, N-8
- Platelet count -79000 /cmm
- ESR- 35 mm / hr
- Montoux test - 16 mm after 72 hours
- X-Ray chest showing prominent bronchovascular markings.

- sputum culture yielded *Mycobacterium tuberculosis* complex
- Skin biopsy of lesion showed presence of superficial dermal granulomas around the hair follicles along with presence of epithelioid cells, lymphocytes & few giant cells, mycobacteria were seen.



Fig. 1: Multiple papulonodular lesions seen over abdomen



Fig. 2: Multiple papulonodular lesions seen over back & buttocks



Fig. 3: X chest PA view showing prominent Bronchovascular marking



Fig. 4: Complete regression of skin lesions after five weeks of Anti Tubercular Treatment.

Discussion : Lichen scrofulosorum is a rare tuberculid that presents as a lichenoid eruption of minute papules in children and adolescents with tuberculosis. The lesions are usually asymptomatic, closely grouped, skin-colored to reddish-brown papules, often perifollicular and are mainly found on the abdomen, chest, back, and proximal parts of the limbs. The eruption is usually associated with a strongly positive tuberculin reaction.^[6]

Lichen scrofulosorum was first described by Hebra in 1868 as a lichenoid eruption in children and young adults with tuberculosis and strongly positive tuberculin reactions.^[1] The eruption consists of tiny, perifollicular, lichenoid papules arranged in groups. Other dermatoses which have to be differentiated from the eruption include keratosis pilaris, lichen spinulosus, lichen nitidus, pityriasis rubra pilaris and lichenoid sarcoidosis. Follicular papules in keratosis pilaris are usually noninflammatory and present on the upper thighs and arms with little tendency to grouping. Lichen spinulosus usually presents with a spiny process over the lichenoid papule. In lichen nitidus, shiny lichenoid papules are predominantly extrafollicular with characteristic involvement of male genitalia. Pityriasis rubra pilaris and lichenoid sarcoidosis can be differentiated by their characteristic histology.^[7]

The pathogenesis of lichen scrofulosorum is considered to be a hematogenous spread of bacilli that are usually not detected in tuberculids as they are present in a fragmented form or have been destroyed by immunological mechanisms.^[6,7]

The concept of the tuberculid was introduced by Darier in 1896.^[6] A tuberculid is a cutaneous immunological reaction to the presence of occult tuberculosis in a patient with moderate to high immunity. The main features of tuberculids are a positive tuberculin test, evidence of past or present occult tuberculosis and a good response to antituberculosis therapy.^[6]

In the past, many skin disorders were interpreted as tuberculids while presently, only three conditions are considered as true tuberculids: lichen scrofulosorum, papulonecrotic tuberculid and erythema induratum of Bazin. The others such as lupus miliaris disseminata faciei (LMDF) are referred to as pseudotuberculids as they do not respond to antituberculous therapy despite having a tuberculoid histology.^[8]

Of the three tuberculids, the incidence of lichen scrofulosorum was found to be the lowest (2%) in a large study conducted in Hong Kong. This highlights its rarity and significance as an important marker of undetected tuberculosis.^[9] We report here a case of this rare dermatosis for its academic interest

References :

1. Yates VM. Mycobacterial infections. In: Burns T, Breatnach S, Cox N, Griffiths C, editors. Rook's Textbook of Dermatology. 8th ed. Oxford:Blackwell Science; 2010.p. 31.21-2.
2. Sethuraman G, Ramesh V. Cutaneous tuberculosis in children. Pediatric Dermatol. 2013; 30: 7-16.
3. Thakur BK, Verma S, Hazarika D. A clinicopathological study of cutaneous tuberculosis at Dibrugarh district, Assam. Indian J Dermatol. 2012; 57: 63-65.
4. Dogra N, Shah S, Dogra D. Lichen scrofulosorum: an important marker of occult tuberculosis. Indian J Dermatol. 2008; 53: 91-92.
5. Singal A, Sonthalia S. Cutaneous tuberculosis in children: the Indian perspective. Indian J Dermatol Venereol Leprol. 2010; 76: 494-503.
6. Yates VM, Rook GA. Mycobacterial infections. In: Burns T, Breatnach S, Cox N, Griffiths C, editors. Rook's textbook of dermatology. 7th ed. Oxford: Blackwell Science; 2004. p. 28.1-28.39.
7. Thami GP, Kaur S, Kanwar AJ, Mohan H. Lichen scrofulosorum: A rare manifestation of a common disease. Pediatr Dermatol 2002;9:22-6.
8. Sing G, Kaur V, Singh S. Bacterial infections. In : Valia RG, Valia AR, Siddappa K, editors. Textbook and atlas of dermatology. 2nd ed. Mumbai: Bhalani Publishing House; 2003. p. 190-214.
9. Chang LY, Lo KK. Cutaneous tuberculosis in Hongkong: A ten year retrospective study. Int J Dermatol 1995; 34:26-9.



**“FATHER OF
AMBULANCE
SERVICE”**

Dr. Edward B. Dalton

Chief Medical Officer of Depot Field Hospital,

- (1834-1872)
- Born in Lowell, Massachusetts
- Graduated from Harvard University in 1855
- Received a medical degree from the College of Physicians and Surgeons in New York City in 1858.
- He practiced medicine in New York at St. Luke's Hospital.
- When war broke out Dr. Dalton signed up as a volunteer surgeon and first worked with the U.S. Navy. Later he was a commissioned surgeon of the 36th New York volunteers, then surgeon of U.S. Volunteers, medical inspector of the 6th army corps, and medical director of the Department of Virginia, before being transferred to the Army of the Potomac in March 1864.
- Dalton served as surgeon in the Army of the Potomac where part of his duties was to establish field hospitals behind the battle lines. One major problem the doctor attempted to fix was the transportation of wounded from the battle lines to the hospitals. Often times the stretchers, carts and wagons would make the injuries worse. This led Dalton to develop an ambulance with suspension systems to take the shocks of the roads which greatly improved patient care. At the end of the war, Dr. Dalton was hired by New York City's Department of Charities and Corrections and developed a civilian version of the ambulance system he started with the Army. He was later named the city's first Sanitary Superintendent for the Board of Health. By World War I, most major cities had ambulance systems in place.
- Dr. Dalton died in Santa Barbara, California in May 1872 while visiting the West Coast to improve his illness.

(source :

http://en.wikipedia.org/wiki/History_of_the_ambulance)