

## Scrofuloderma: Cutaneous tuberculosis. A case report

Sanjeev Kumar\*, Ravi Bhatia, S. S. Surana, S. K. Mehra, Ritu Bhatnagar

Pacific Medical College and Hospital, Udaipur, Rajasthan, India

### \*Corresponding Author:

Name: Sanjeev Kumar

Email: [usanjeevkumar30@gmail.com](mailto:usanjeevkumar30@gmail.com)

**Abstract:** Scrofuloderma is a common type of cutaneous tuberculosis, which is characterized by a direct extension of the skin which overlies the infected lymph gland, bone or joint, that breaks down to form an undermined ulcer. This condition clinically mimics many other conditions like Actinomycosis, Sporotrichosis and Chromoblastomycosis. Scrofuloderma is caused by tubercle bacilli and common anti-tuberculous drugs are recommended for treatment.

**Keywords:** Scrofuloderma, Tubercle bacilli, Anti-tuberculous drugs

### INTRODUCTION

Scrofuloderma is a cutaneous manifestation of tuberculosis, it has a worldwide distribution. It occurs mainly on the skin over the cervical lymph nodes or above the bony areas [1]. Scrofuloderma, also called 'tuberculosis colliquativa cutis', the clinical appearance is characterized by subcutaneous nodules that enlarge gradually and suppurate to form sinus tracts, which can become draining fistulas [1-3]. This condition clinically mimics many other conditions like Actinomycosis, Sporotrichosis and Chromoblastomycosis [4]. We report a case of scrofuloderma, in our tertiary care hospital.

### CASE REPORT

A 7 year-old girl, got admitted to the paediatric unit of Pacific Medical College and Hospital, Udaipur, India with the complaint of a discharging ulcer over pectoral region[Fig-1]. The lesion had started as a pea sized papule, which had progressed to a nodule and a pustule, leading to draining sinus within a span of 6 months. She had a history of jaundice one month back.

Pus swabs were collected and sent for KOH mount, Gram staining, Ziehl Neelsen staining, routine and mycobacterial cultures. Blood was sent for routine tests as well as HIV and HBsAg test. Three consecutive sputum samples for Ziehl Neelsen staining were done for excluding pulmonary tuberculosis. A tuberculin test was also administered.

Gram staining of pus revealed only good number of pus cells and KOH mount negative for fungal elements. Ziehl Neelsen staining of pus was positive for acid fast bacilli and sputum samples were negative for acid fast bacilli. There was no growth on routine culture. However, growth appeared on LJ slant

during 6<sup>th</sup> week of incubation (Fig. 2). The colonies were identified to be those of Mycobacterium tuberculosis by Ziehl Neelsen staining (Fig. 3), niacin and catalase tests. Haematological tests were within normal limits, except raised ESR-110mm/1<sup>st</sup> hour, Platelets count 8.84 lac/cumm, MCH 18.6pg and Hb-8.0gm%. HIV and HBsAg tests were negative. Tuberculin test was positive (20mm). Treatment was started with common antitubercular drugs and the patient was advised to intermittent follow-ups.

### DISCUSSION

Cutaneous tuberculosis accounts for about 1.5% of extrapulmonary tuberculosis cases. Most cases are seen in the age group of 10 to 14 years, with no significant male or female preponderance except scrofuloderma that tends to occur more commonly in girls [6]. In the present case scrofuloderma was observed in a 7-year old girl. Scrofuloderma and lupus vulgaris are the two most common forms reported in India [5, 6]. Cutaneous tuberculosis forms small proportion of extrapulmonary tuberculosis, the incidence of which has fallen from 2% to 0.15% in India, whereas it is rare in developed countries. Scrofuloderma is that results from breakdown of skin overlying a tuberculosis focus, usually at a lymph node. This leads to the formation of "cold abscesses" in the skin that gradually enlarge, result in formation of ulcers and multiple skin fistulas with drainage of purulent discharge. The lesion arises due to inoculation of bacteria by exogenous sources and by haematogenous spreads. In the present case, though the exact mode of infection could not be identified but pulmonary tuberculosis was excluded by examined sputum for AFB and chest X-ray. Scrofuloderma clinically mimics many other conditions such as (i) Actinomycosis (ii) sporotrichosis (iii) chromoblastomycosis etc [4]. In our

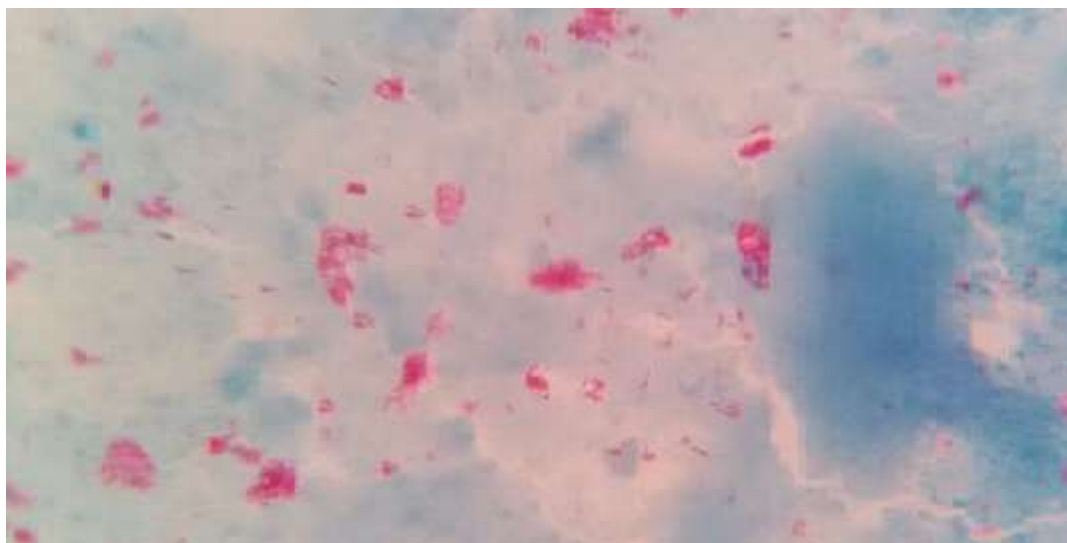
case we perform KOH examination, Grams staining, fungal culture and routine bacteriology culture for excluding above clinical forms. Moreover in present case, demonstrated the acid fast bacilli from pus swab, positive tuberculin test and we isolated the acid fast bacilli from pus swab on Lowenstein-Jensen media.



**Fig. 1: Shows ulcer over pectoral region**



**Fig. 2: Culture growth of *M.tuberculosis* on Lowenstein-Jensen media**



**Fig. 3: Ziehl-Neelsen's stain: Acid fast bacilli (100X)**

#### CONCLUSION

Scrofuloderma, a common presentation of cutaneous TB and it is an important health problem in this part of the country especially in lower socioeconomic group. Parents should be encouraged for routine BCG vaccination as well as proper nutrition of their children. Cutaneous tuberculosis mimics many other conditions, so a microbiological correlation is helpful for excluding other clinical forms.

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Kumar D *et al.*, had reported that lupus vulgaris was its commonest clinical form, followed by scrofuloderma, tuberculous cutis verrucosa and tuberculous gumma [7]. We reported a case of scrofuloderma, the most common type of cutaneous tuberculosis which was also noticed in some other studies [8-11].

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