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A Newly Emerging Clinical Presentation of Lupus Vulgaris- Case Report of a Bangladeshi Patient

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ABSTRACT

Lupus vulgaris (LV) is more common among all forms of cutaneous tuberculosis (TB). It usually occurs in previously sensitized individuals with moderate high immunity either by direct exogenous inoculation of tubercle bacilli or by hematogenous or lymphatic spread from an underlying focus of infection endogenously. Our patient was a 55year old woman presented with asymptomatic, gradually spreading erythematous plaque over the dorsal surface of the right hand for 1.5 years. Her lesion started as a pus-filled cavity which she could squeezed out and underwent repeated excisions followed by antibiotic therapy, but recurrence occurred every time. Then she was referred to Dermatology department. Her cutaneous examination revealed multiple erythematous papules coalescing to form plaque which was asymptomatic. Diascopy of the lesion revealed brownish yellow colouration but her tuberculin test was negative. As our provisional diagnosis was lupus vulgaris, we proceed for lesional skin biopsy for histopathology which unveiled granulomatous inflammation in mid dermis consistent with lupus vulgaris. Our focus of reporting the case to enlighten the diagnostic challenges, emphasizing the significance of clinical suspicion despite of negative tuberculin test specially in endemic zone of tuberculosis and initiation of early treatment to reduce the morbidity and also sharing knowledge contributing to new challenges.

CASE REPORT

INTRODUCTION

Among the all forms of cutaneous tuberculosis, lupus vulgaris is a common, chronic, progressive, paucibacillary variety that usually occurs in individual who is previously sensitized with Mycobacterium tuberculosis and have a high degree of immunity against the organism[1]. Common sites of lupus vulgaris are face and extremities[2]. Tuberculosis is one of the major causes of morbidity and mortality in Bangladesh with a huge burden of patients that consists almost 1/6th of the global burden of TB patients[3]. Plaque, ulcerative, mutilating, vegetative, tumour like, papular and nodular variety are the common clinical patterns exhibited by lupus vulgaris[4]. We report a case of lupus vulgaris which presented initially as a pustular eruption and patient underwent repeated drainage by excisions along with antibiotic therapy, but recurrence occurred every time. Although atypical presentation is not uncommon, sometimes clinicians failed to notice, eventually complicated by late diagnosis and increase morbidity. Our aim for reporting is to avoid late diagnosis and decrease morbidity.

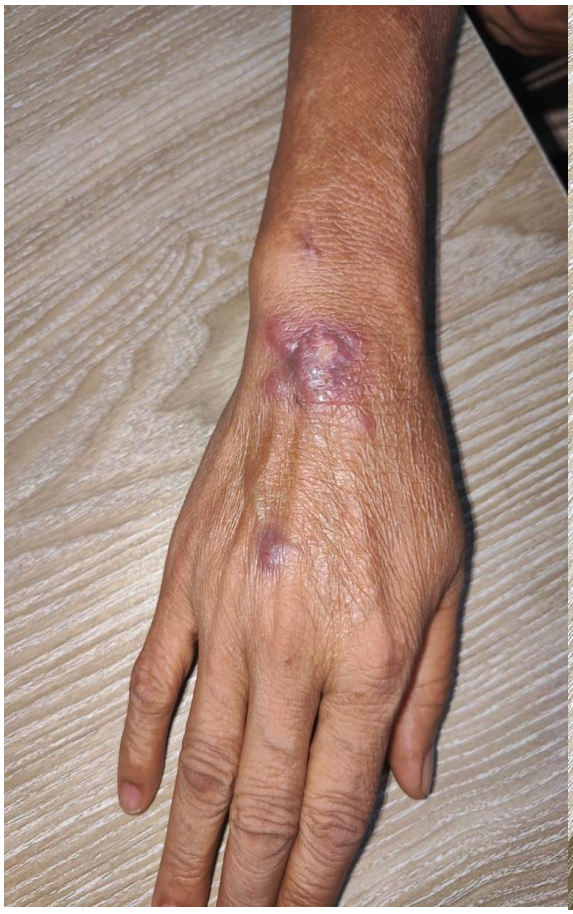


Figure-1: Before treatment

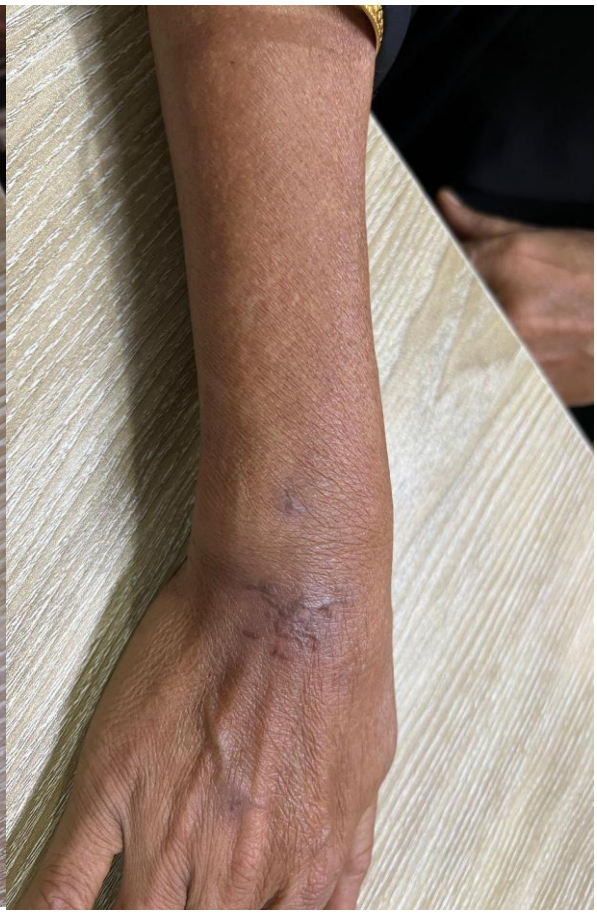
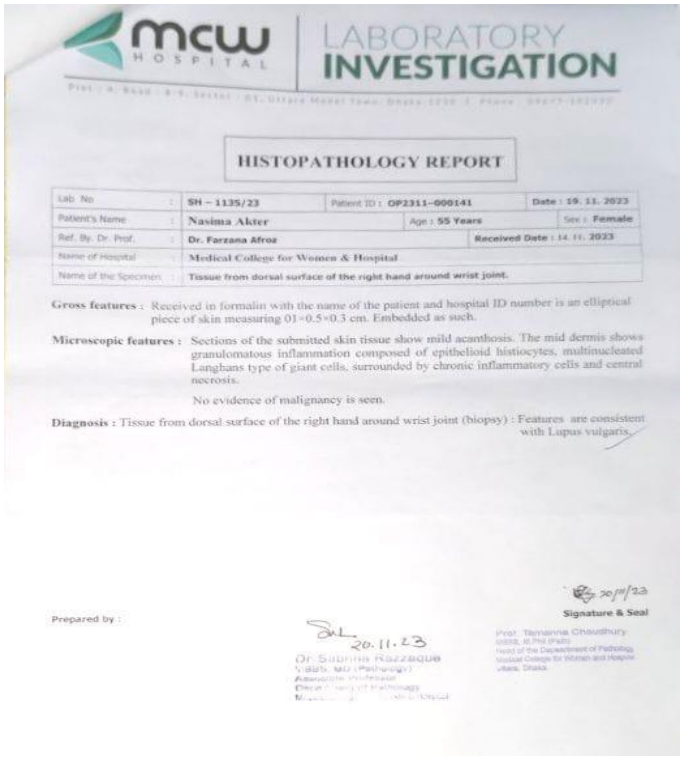


Figure-2: After treatment


mcw HOSPITAL | LABORATORY INVESTIGATION

HISTOPATHOLOGY REPORT

Lab No	SH – 1135/23	Patient ID : OP2311–000141	Date : 19. 11. 2023
Patient's Name	Nasima Akter	Age : 55 Years	Sex : Female
Ref. By. Dr. Prof.	Dr. Farzana Afroz		Received Date : 14. 11. 2023
Name of Hospital	Medical College for Women & Hospital		
Name of the Specimen	Tissue from dorsal surface of the right hand around wrist joint.		

Gross features : Received in formalin with the name of the patient and hospital ID number is an elliptical piece of skin measuring 01×0.5×0.3 cm. Embedded as such.

Microscopic features : Sections of the submitted skin tissue show mild acanthosis. The mid dermis shows granulomatous inflammation composed of epithelioid histiocytes, multinucleated Langhans type of giant cells, surrounded by chronic inflammatory cells and central necrosis.

No evidence of malignancy is seen.

Diagnosis : Tissue from dorsal surface of the right hand around wrist joint (biopsy) : Features are consistent with Lupus vulgaris.

Prepared by :

20.11.23

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Figure-3: Histopathology report of the patient

CASE PRESENTATION

A 55-year-old female presented with asymptomatic, gradually spreading erythematous plaque over the dorsal surface of right hand for 1.5 years. She gave history of occasional pus formation within the lesion which she could squeezed out. She underwent repeated excisions of the lesion along with antibiotic therapy during this period, but recurrence occurred every time after excision. Then she was referred to Dermatology department for further evaluation. There was no history of trauma and atrophy at the time of examination. She had gradual weight loss, but no other systemic complaints like fever, night sweats, prolonged cough, sputum production, chest pain were present. Her family history was not contributory. Cutaneous examination revealed multiple, erythematous papules, coalescing to form plaque with satellite lesions which was firm in consistency, distributed in a linear pattern over the dorsal surface of the right hand. Lesions were non tender and there was no atrophy at the time of examination. Diascopy of the lesion revealed brownish yellow colouration. Regional lymphadenopathy was absent. Systemic examinations revealed no abnormality. Some investigations were carried out which revealed elevated erythrocyte sedimentation rate (63 mm in 1st hour), normal Chest X-Ray, negative Mantoux test (MT). Our provisional diagnosis was lupus vulgaris. To confirm the diagnosis, lesional skin biopsy for histopathology was done, which shows mild acanthosis, granulomatous inflammation on mid dermis composed of epithelioid histiocytes, multinucleated Langhans type of giant cells, surrounded by chronic inflammatory cells and central necrosis.

The features are consistent with a diagnosis of lupus vulgaris. Then, she was advised to take antitubercular therapy consisting of 4FDC (Isoniazid, Rifampicin, Pyrazinamide, Ethambutol) for 2 months followed by 2FDC (Isoniazid, Rifampicin) for the next 4 months. The patient came to follow

up after 6 months, where complete resolution of the lesion was seen with few atrophic areas.

DISCUSSION

In this subcontinent, Lupus Vulgaris is the commonest form of cutaneous TB affecting more commonly women than men[1]. It may be acquired by direct inoculation of bacilli exogenously or by hematogenous or lymphatic spread from an underlying tubercular focus, even it may occur secondary to BCG vaccination[5]. Commonly it occurs on face and neck region in western community but in India and Bangladesh lower limb specially thighs and buttocks are affected[3,5,6]. Frequent clinical patterns of LV are papular, nodular, plaque, ulcerative, hypertrophic, atrophic, tumour like, vegetative and mutilating[5]. Usual presentation is asymptomatic plaque which starts as red-brown papules coalesce to form scaly plaque and expands gradually by development of new papules at periphery. 'Apple-jelly' colour or pale brownish yellow colour is exhibited when blanched by diascopic pressure[7,8].

As we know tuberculosis is a granulomatous inflammatory reaction, classic tubercles are histologic hallmark of LV[8]. In 50% cases, caseation necrosis within tubercles is marked. Secondarily epidermis is affected, sometimes may be flattened or other times hypertrophic. AFB may present in 10% or less cases with rarely positive PCR[2]. In our case, epidermis showed mild acanthosis and typical tubercle was present in mid dermis. In case of LV, tuberculin test is positive in most of the cases but in our case it was negative. Culture of TB bacilli can be done from skin lesions but 50% cases results are negative[2,8].

In Bangladesh, Tuberculosis (TB) is a major public health concern. WHO ranked Bangladesh sixth (6^{th}) among the world's 22 high-burden TB countries in 2008[3]. In the US, HIV emergence has increased 20% of extrapulmonary TB[9]. Exact prevalence of cutaneous TB in Bangladesh is not known but 0.1%-0.9% of total dermatology out-patients in India[3].

Ashima R Chandan reported a case of LV which is similar to our case where an asymptomatic pus-filled cavity formed a crust and gradually spread but it differs in site, age and positive MT test[6]. Another case report by Sankalp Yadav during Covid-19 pandemic also had similarities to the present case in aspect of gradual spreading and starting as an asymptomatic pustule.

Current study is dissimilar by age, duration and negative tuberculin test. Our aim to create awareness regarding various manifestations, importance of skin biopsy where tuberculin test is negative and also early administration of anti-tubercular drug to decrease morbidity, dissemination and scarring.

CONCLUSION

Cutaneous TB, especially LV has varied clinical presentation, so diligent observation is essential for clinical diagnosis particularly in unusual presentation. Sometimes this clinical condition can progress to carcinoma for which delayed diagnosis may be fatal for the patient. Our focus to enlighten the diagnostic challenges, emphasizing the significance of clinical suspicion despite of negative tuberculin test specially in endemic zone like Bangladesh and initiation of early treatment to reduce the morbidity and contributing the cumulative knowledge sharing.

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