

Short Commentary

Oral and Maxillofacial Manifestations of Tuberculosis Presented to Primary Health Care Centres in Port Sudan, Sudan

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Background

Tuberculosis is a chronic granulomatous disease caused by various strains of mycobacteria, usually Mycobacterium Tuberculosis in humans. Robert Koch, a German physician, discovered the Tuberculosis bacillus in 1882 [1]. It has been a worldwide major health problem for centuries. Although the disease's prevalence reduced decades ago, it still has extremely high prevalence in Asian and African countries. It may take any form clinically, but with decline in number, these tuberculosis lesions of oral cavity have become so rare that they are frequently overlooked in the differential diagnosis of oral lesions. Although, oral manifestations of tuberculosis has a rare occurrence, but it has been considered to account for 0.1-5% of all TB infections.

Materials and methods

Prospective multicentre study was attempted to study the clinical changes and oral manifestation detected in patients diagnosed with tuberculosis in the second quarter (May, June, July, and August) of the year and presented to the five primary health care centres in Port Sudan city. 123 responded and verbally consented out of total of 220 patients in the whole third quarter, to undertake oral examination.

Results

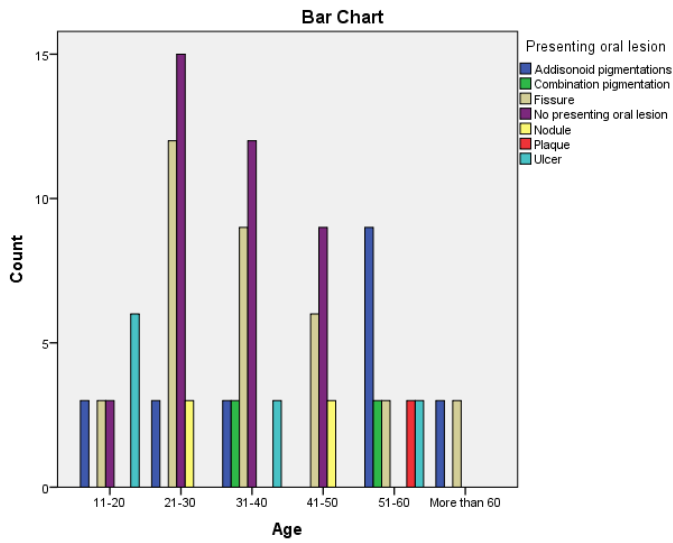
Majority of patients involved in the study in the age group between 21-30 yrs. Which comprises 26.8% of the study sam-

ple, followed by 24.4% for the age group 31-40 yrs. While more than 60 group comprises only 4.9%. Majority of patients participated were males which comprised 58.5% of the total sample compared to females which comprised 41.5%. The most affected tribe in the study were bni amer (73.2%), and hadandawa (Adrobe) (26.8%). The percentage of primary tuberculosis cases (51.2%), while secondary (extra pulmonary tuberculosis) was (48.8%). The types of extra pulmonary tuberculosis detected in the study; pleural type comprised the majority of extra pulmonary tuberculosis cases by (30%) of the total cases of the study. The oral changes detected during oral clinical examination of tuberculosis patients, both primary and secondary tuberculosis. (31.7%) of the cases have no abnormality in the oral region, while (29.3%) demonstrated fissures in the tongue and (17.1%) demonstrated pigmentations. The sites of oral changes detected, the tongue is the most common affected by (53.2%) of the total cases, (8%) was the buccal mucosa, (2.4%) the lips and (1.6%) the tonsils. Type of investigations used to detect tuberculosis; shows that AFB tested positive in 27.3% of the study sample. (63.4%) used AFB sputum test, (24.4%) used FNA test and (4.9%) used genetic expert. AFB tested positive in 27.3% of the study sample.

Age* presenting oral lesion association

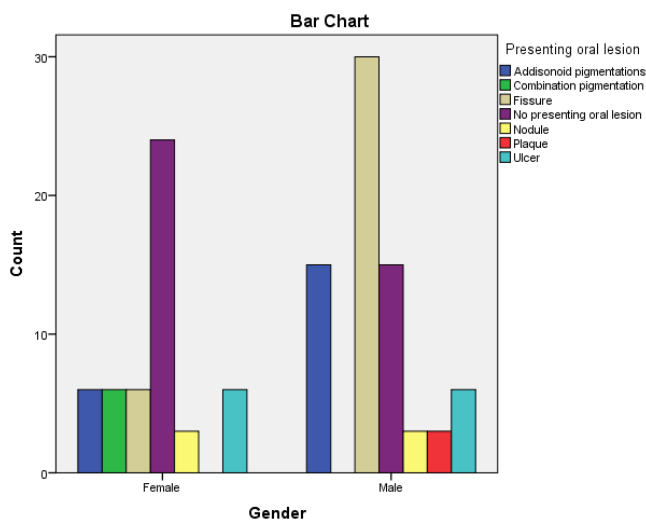
P-value .000, shows that there is significant association between age of the patients and presenting oral lesion.

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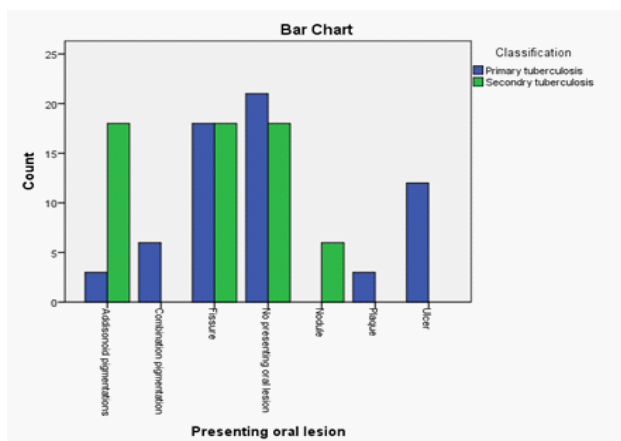
Gender* presenting oral lesion association

P-value .000, shows that there is significant association between gender and presenting oral lesion.



Classification of tuberculosis* presenting oral lesion association

P-value .000 shows that there is significant association between classification of tuberculosis and presenting oral lesion.



Discussion

The present study was attempted to study the clinical changes and oral manifestation detected in patients diagnosed with tuberculosis in the second quarter (May, June, July, and August) of the year and presented to the five primary health care centres in Port Sudan city. 123 responded and verbally consented to undertake oral examination. Demographic data revealed that majority of patients involved in the study in the age group between 21-30 yrs., which comprises 26.8% of the study sample. While more than 60 group comprises only 4.9%. This is may be attributed to that the younger population is more compliant to treatment and regular follow-up. Most of patients participated were males which comprised 58.5% of the total sample compared to females which comprised 41.5%, this coincide with the fact that Men are more likely to be diagnosed with TB than Women Globally [2]. Poverty is major determinant of tuberculosis [3], most of the participants were unemployed, constituting (56.1%), while labourers constituted (36.6%). Most affected tribe in the study were bani amer (73.2%), and hadandawa (Adrobe) (26.8%). The percentage of primary tuberculosis cases (51.2%), while secondary (extra pulmonary tuberculosis) was (48.8%), pleural type extra pulmonary tuberculosis which comprised (30%) of the study sample, AFB positive primary tuberculosis constituted (27.3%). Oral manifestations have a relatively rare occurrence, the incidence has been reported as less than 0.5-1% amongst all the Tuberculosis patients, according to various studies [4], oral changes detected during oral clinical examination of tuberculosis patients included in the study was (31.7%) of which have no abnormality in the oral region, while (29.3%) demonstrated fissures in the tongue, tongue manifestations association can be attributed to tuberculosis and should be further investigated for confirmation, as it is difficult to link an ulcer or fissure in the tongue to tuberculous origin [5]. The highest percentage of oral changes detected in the tongue by (53.2%), which corresponds to the literature, (8%) was the buccal mucosa, (2.4%) the lips and (1.6%) the tonsils. Since extra pulmonary tuberculosis is a common cause of Addison disease due to destruction of adrenal cortex by mycobacterium tuberculosis [6], addisonoid changes appear on tuberculous patients and Addisonoid oral pigmentations appeared in (17.1%) of the study sample. Tuberculosis can manifested as enlarged cervical lymph nodes [7], this study demonstrated (4.9%) for axillary lymphatic tuberculosis of the total cases, while cervical was (6%). It had been noticed during study that most of the patients presented with pneumonia and investigated commonly with Plain Chest x-ray which showed Consolidation in primary tuberculosis and Pleural effusion in pleural extra pulmonary tuberculosis.

Conclusion

- Younger patients is the most participating category, especially age group, 21-30 yrs and 31-40 yrs. By 33% and 30% respectively.
- Males are most affected gender and low socioeconomic status as well.
- Tongue is the most common site for changes associated with tuberculosis.
- Fissuring of the tongue is the most common finding by

29.3% followed by pigmentations 17.1%.

- Some oral manifestations is a sign of systemic tuberculous dissemination.
- Pulmonary and extra pulmonary tuberculosis almost have an equal distribution in the sample size.
- Cervical lymph nodes constituted most of the lymphatic extra pulmonary tuberculosis.

Recommendations

- Oral manifestations of tuberculosis is a step forward early diagnosis of tuberculosis.
- Histopathological examination is required for oral changes to confirm tuberculous origin of the lesion.
- Further studies should be conducted based on a larger sample size.

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