

Histopathological changes in gingival tissue of patients having pulmonary tuberculosis (TB) in Pakistan

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Data regarding oral lesions in pulmonary tuberculosis TB patients is very scanty but the most reported ones include ulcers, erythematous patch, granuloma and amyloidosis. No such study has been reported in Pakistan. This study determines the histopathological changes in gingival tissue of patients with pulmonary TB.

Gingival biopsies of 100 patients already diagnosed with pulmonary TB were taken and microscopic changes were observed after staining with H&E, ZiehlNeelsen (ZN), Kinyoun and CongoRed stains. Culture of gingival biopsies was also done using Bactec MGIT 960.

Mean age of the patients was 32.31 ± 13.27 years. Male to female ratio was 2:1 (32% males, 68% females). Most (85%) patients belonged to low socioeconomic status. The patients presented with fever (99%), cough (97%), sputum (86%), weight loss (72%) and hemoptysis (9%). On clinical examination mucositis was present in 95%, periodontitis in 14% and ulceration in 3% cases.

On microscopy, acanthosis (100%), basal atypia (62%), loss of maturation and superficial neutrophilic abscesses (4% each) were observed. The connective tissue showed hyalinized collagen (100%), neovascularization (69%), fibrinoid necrosis (12%) and calcification (2%). Chronic nonspecific inflammation was observed in 54% cases with epithelioid cells seen in only one case. Stromal amyloid confirmed by Congo Red stain and polarized microscopy was observed in 35% cases while ZN and Kinyoun stains as well as culture did not yield any acid fast bacilli in the gingival tissue. When the clinicopathological variables were compared, significantly increased ($p=0.03$) frequency of oral ulcers was found in males while mucositis, inflammation and amyloid were found to be on an average 1.5-10 times more frequent in females as compared to males. The frequency of oral lesions increased with an increase in ESR levels, with no significant association with mucositis ($p=0.03$). All other variables yielded insignificant association.

Oral mucosal changes predominantly mucositis as well as clinically undetectable localized gingival amyloidosis was observed in patients with pulmonary tuberculosis. Increased ESR levels can be a reliable predictor for development of oral lesions.

Biography

Sunnaeyah Waris is a postgraduate trainee in Oral Pathology at University of Health Sciences, Lahore, Pakistan. She has completed her M. Phil research thesis titled "Gingival Changes In Patients Having Pulmonary Tuberculosis". She has done a poster presentation in 24th National Dental Conference conducted by Pakistan Dental Association in 2008. Earlier she acquired Bachelors in Dental Surgery in 2006. She has worked for 3 years as a junior lecturer in the departments of Oral Pathology and Periodontology and Orthodontics in FMH College of Dentistry Lahore, Madina University Medical College and Punjab Medical College, Faisalabad, Pakistan.

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