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Tuberculosis and visceral rib lesions in the Kirsten skeletal collection

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Infectious diseases such as tuberculosis can be investigated after death by examination of skeletal material. Visceral rib lesions (VRL) can result from inflammation of the adjacent pleura caused by lung diseases and have specifically been associated with pulmonary tuberculosis. The aim of this study was to evaluate VRL in the Kirsten Skeletal Collection and relate it to the documented cause of death (COD). Ribs from skeletons (n=300, male/female ratio=2/1) were examined macroscopically using a magnifying lamp. Three population groups representative of the Western Cape were compared in this study: Black (n=47), mixed race (n=209) and White (n=43). The rib number and region of each VRL was documented. Rib lesions occurred in 29.33% of skeletons with the black (31.91%) and mixed (33.97%) population groups having statistically significant higher prevalence than the white (4.65%) group. Of skeletons with tuberculosis as a COD, 58.06% showed VRL, while 47.83% of skeletons with pneumonia showed VRL. The most commonly affected ribs were the right ribs 4-8. The vertebral region was the most common site for VRL. Previous studies have found differences in prevalence of VRL with some suggesting a higher prevalence in tuberculosis than non-tuberculous pulmonary diseases. The present study, however, illustrated a similar prevalence for both Tuberculosis and Pneumonia. The distribution of VRL in the present study was similar as previous studies. To conclude, the extent to which VRL can be used as a diagnosis criterion for Tuberculosis in skeletons is still uncertain and more research is required to improve interpretation of VRL.

Biography

Jacklynn Walters has completed her Hons BSc degree at Stellenbosch University and is currently busy with her MSc. She has published three papers in peer reviewed journals and was first author of one of these. She has also presented her work at the annual conference of the Anatomical Society of Southern Africa (ASSA: 2014, 2016), academic year day of Stellenbosch University (Faculty Medicine and Health Sciences) (2015) and the International Conference of Macroscopic and Microscopic Anatomy (ICMMA: 2015).

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