

International Meeting on

# Clinical Case Reports

April 18-20, 2016 Dubai, UAE

## Role of vitamin D deficiency in susceptibility to tuberculosis and treatment response

Kashaf Junaid<sup>1</sup>, Abdul Rehman<sup>2</sup> and Tahir Saeed<sup>3</sup><sup>1</sup>University of the Punjab, Pakistan<sup>2</sup>The University of Lahore, Pakistan<sup>3</sup>Gulab Devi Chest Hospital, Pakistan

Vitamin D, a fat soluble vitamin is well known for calcium homeostasis. Deficiency of vitamin D is not only linked with rickets or osteomalacia but with many other infectious and metabolic disorders. Emerging evidences suggest the relation of vitamin D deficiency in tuberculosis. The objectives of this study were to investigate the association of vitamin D deficiency with tuberculosis and to see its impact on antituberculous response. We recruited 260 TB patients from Gulab Devi Chest Hospital, Lahore who had yet not started anti TB treatment for this admission. Any patient with co-morbidity or age above 60 years was excluded. Serum 25(OH) D was measured in TB cases, contacts of TB patients and controls from general population. Baseline vitamin D status was significantly associated with TB ( $P < 0.01$ ). Mean vitamin D level in TB patients was 23 nmol/ L which is much lower than TB contacts and controls from general population. Sputum smear sample for the presence of acid fast bacilli was examined after every two weeks for all included cases, till sputum converted negative for AFB. Survival analysis indicates that patients with deficiency of vitamin D required more time to sputum smear conversion (median days 22.5, IQR 22.5-37.5) and this association of vitamin D with response to antituberculous treatment was genotype independent. High prevalence of vitamin D deficiency in pulmonary TB patients indicates that vitamin D is a risk factor for the development of active tuberculosis. Furthermore, its impact in response to antituberculous treatment also explains its significant role in the management of tuberculosis. As early sputum smear conversion can break the chain of infection and further spread of tuberculosis. Therefore, maintaining vitamin D status in TB patients might be helpful to control tuberculosis.

### Biography

Kashaf Junaid has completed her PhD from the Department of Microbiology and Molecular Genetics, University of the Punjab. She has also done research work in Bart's Institute of Primary Healthcare, Queens Mary University of London. She is currently working as an Assistant Professor in The University of Lahore.

[kashaf\\_junaid@hotmail.com](mailto:kashaf_junaid@hotmail.com)

### Notes: