Author's response to reviews

Title: Case Report: Nocardia associated with series of Patients with Ectopic Cushings

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Editor,

BMC Endocrine Disorders
BioMed Central
236 Gray's Inn Road
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Dear Editor,

Enclosed is our manuscript entitled “Nocardia associated with series of Patients with Ectopic Cushings” for consideration by the BMC Endocrine Disorders. The manuscript has been submitted as a case series.

Cushing syndrome is a disease resulting from excess cortisol secretion which has a high mortality if left untreated. There are several causes of hypercortisolism which must be differentiated. Ectopic Cushings is endogenous ACTH dependant form of Cushing’s associated with markedly raised ACTH and cortisol levels. Elevated cortisol levels lead to an impaired immune response by neutrophils & macrophages and diminished recruitment of these inflammatory cells into the infected site. This sets the stage for the occurrence of bacterial and fungal opportunistic infections. Opportunistic infections in Cushings syndrome carry a high mortality and morbidity. A variety of opportunistic infections have been demonstrated in the presence of endogenous cortisol production. Most popular are pneumocystis carini, Nocardia asteroids and Cryptococcus neoformans. Nocardia is a gram positive bacterial infection caused by aerobic actinomycetes in the genus Nocardia

Our case series highlights the importance of considering nocardia, a gram positive bacteria, as a causative agent for the pulmonic manifestations of patients diagnosed with Cushing’s syndrome, particularly in the Ectopic Cushing’s subset.
This series also includes the first case reported in which the signs and symptoms of Cushing’s subsided simply after antibiotic treatment of Nocardia.

To the best of our knowledge, no case to date has been reported in the literature in which treatment of the nocardia resulted in disappearance of the clinical, biochemical and radiologic manifestations of the Ectopic Cushing’s (as in one of our case). This included the severe proximal myopathy, refractory hypokalemia, hypercortisolism and the pulmonary lesions that the patient had presented with. This suggests that nocardia infection may not only result from hypercortisolism, but can also itself lead to raised cortisol levels, and the manifestations of Cushing’s syndrome. The mechanism by which nocardia can cause Cushing’s syndrome is not clear, and, therefore, needs to be further investigated.

The manuscript has nearly 3000 words, excluding title page, tables, & references. There are two tables. All authors have read the final manuscript and have no conflict of interest. Thank you for your consideration. I look forward to hearing from you.

We would like to inform that as per your instructions we have made changes in our manuscript by moving the figures at the bottom of the Manuscript and have added the scanned copy of Consent form and further to your kind knowledge, we have also acknowledged Mr Muhammad Shahid Sheikh for helping us in reviewing the Manuscript

Sincerely,

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