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Case Report Open Access

Esophageal Tuberculosis Infection in a Simultaneous Pancreas and Kidney Transplant Recipient

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Abstract

Solid organ transplant recipients are at increased risk of opportunistic infections, including tuberculosis, which may be caused by re-activation of latent disease or acquired *de novo*. Tuberculosis can affect any organ, present atypically, is diagnostically challenging and potentially fatal. Esophageal tuberculosis is generally rare, and usually secondary to infection in adjacent mediastinal structures. We report a case of esophageal tuberculosis in a simultaneous pancreas-kidney transplant recipient, who presented with symptoms of odynophagia, retrosternal chest pain, weight loss and dry cough, three years post-transplantation. Initial upper gastrointestinal endoscopy revealed non-specific inflammation but no identifiable cause. Repeat endoscopy revealed severe ulceration with a lower esophageal stricture. Multiple esophagealbiopsies taken demonstrated granulomatous inflammation, and evidence of acid-fast bacilli on Ziehl- Neelsen staining. Polymerase Chain Reaction (PCR) assay was specific for *Mycobacterium tuberculosis*. Computerized tomography (CT) of the patient's thorax showed evidence of pulmonary disease and fully sensitive *Mycobacterium tuberculosis* was cultured from the esophageal tissue biopsies, confirming a diagnosis of secondary esophageal tuberculosis.The patient was treated with 6 months of anti-tuberculous therapy, following which she had made a full recovery.

This case illustrates firstly an unusual manifestation of tuberculosis in an immunocompromised patient; secondly the importance of thorough and persistent investigation of unexplained symptoms in this group; and thirdly that tuberculosis should always be considered as it may occur even in patients who do not fulfill conventional criteria for prophylactic therapy.

Keywords: Tuberculosis; Esophageal tuberculosis; Renal transplant; Simultaneous pancreas-kidney transplant

Introduction

Renal and other solid organ transplant recipients are at a significantly increased risk of pulmonary and extra-pulmonary tuberculosis compared with the general population [1,2], particularly in the first year post-transplant. Diagnosis of post-transplant tuberculosis is a challenge, especially in the setting of extra-pulmonary disease. In the face of immunosuppression the disease may present with atypical or non-specific symptoms that can be attributed to other conditions. The absence of pathognomic features on imaging and frequently inconclusive histopathology findings can make the diagnosis difficult to make. Delayed institution of treatment, coupled with drug interactions during therapy, is linked to the high morbidity and mortality in this condition. A high index of clinical suspicion is therefore paramount [2,3].

Mycobacterial infection of the esophagus is a rare but serious condition, which can be difficult to diagnose, especially where evidence of extra-esophageal tuberculosis is lacking. Most previously reported cases are secondary to spread from infected mediastinal lymph nodes, or lungs [4].

We report the case of a simultaneous pancreas-kidney transplant recipient with secondary esophageal tuberculosis associated with subclinical pulmonary disease.

Case Report

A 47-year-old United Kingdom (UK) born woman of Jamaican ancestrywas seen in the renal transplant outpatient clinic with a 2-month history of odynophagia, retrosternal chest pains and 3-kilogramweight loss. She also had a dry cough, which had been previously investigated and diagnosed as gastro-esophageal reflux disease. Seven months prior to presentation, she had a fine needle aspiration of a painless enlarged right submandibular lymph node, which showed no evidence of malignant disease. The swelling subsequently resolved.

The patient had no history of previous tuberculosis infection and had no close contact withanyone diagnosed with tuberculosis. There was no history of smoking, alcohol or illicit drug use and there had been no recent foreign travel.

She had a background of insulin dependent diabetes mellitus since the age of ten with resulting nephropathy, peripheral neuropathy and retinopathy. She had been approaching end stage renal disease when she received a simultaneous pancreas-kidney transplant 3 years previously. Her induction therapy was Alemtuzumab and she was maintained on dual immunosuppressive therapy with tacrolimus and mycophenolatemofetil. Otherthan a single episode of Gram negative bacterial transplant pyelonephritis, she had been well with no delayed graft function or acute rejection episodes. The function of both kidney and pancreas transplants were good with a creatinine of 120 µmol/l and a normal glycatedhemoglobin, without the requirement for insulin. Other past medical history included hypertension andHerpes simplex virus (HSV) genital ulcers treated with aciclovir.

Clinical examination revealed mild epigastric tenderness. There was no lymphadenopathy, hepatosplenomegaly, oro-cutaneous lesions

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