Other full case

Mycobacterium cosmeticum as an unusual cause of ascitesJenny Addley,¹ Paul McKeagney,² Graham Turner,³ Martin Kelly²¹ Department of Gastroenterology, Altnagelvin Hospital, Derry, UK² Department of Respiratory, Altnagelvin Hospital, Derry, UK³ Department of Gastroenterology, Altnagelvin Hospital, Derry, UK

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Summary

Despite an increase in the prevalence of non-tuberculous mycobacterium (NTM), the diagnosis remains difficult and its treatment controversial. Prolonged duration of treatment is frequently needed and eradication is often unlikely.

CASE PRESENTATION

A 63-year-old woman was referred to gastroenterology out-patients with abdominal distension, weight loss and drenching night sweats. Symptoms had been present for a number of months. She had a background of inoperable atrial septal defect with pulmonary hypertension, type II diabetes and a previous laparotomy for ovarian cyst removal in 1967. She was not on any immunosuppressive medication and had no lines or plastic catheters in situ. There was no personal history of tuberculosis (TB) but her mother had pulmonary TB when the patient was age 4. Examination revealed hepatomegaly with ascites but no clinical evidence of cardiac failure.

Liver synthetic function and inflammatory markers were normal. CT scan of the chest did not reveal any evidence of pulmonary TB and CT of the abdomen revealed portal hypertension and ascites (the serum albumin gradient was not in keeping with portal hypertension). After a week of culture, a positive result for a mycobacterium organism was received. No sensitivities for the organism were available. On the assumption that this was likely *Mycobacterium tuberculosis*, antituberculous chemotherapy was commenced as per the British Thoracic Society Guidelines for the management of TB¹ of rifampicin, isoniazid, pyrazinamide and ethambutol for 2 months followed by 4 months of rifampicin and isoniazid. Although subsequently identified as a non-tuberculous mycobacterium (NTM), the exact organism could not be identified in the local laboratory so samples were sent to the regional TB laboratory for identification through PCR.

Due to the delay in identifying the bacteria, the result was received after completion of treatment and in fact demonstrated *Mycobacterium cosmeticum*. The patient's ascites has not as yet recurred following completion of antituberculous therapy.

DISCUSSION

Most industrialised nations have an incidence of NTM of 1-2/100 000 persons.² Not all NTM represents true

infection and may be due to colonisation/contamination. Disseminated NTM is life threatening and occurs most commonly in immunocompromised/ immunodeficient patients.^{3,4}

M cosmeticum is a rapidly growing NTM species which thrives in salons, healthcare and clinic settings and has been reported in association with soft tissue infections where the source is thought to be an environmental contaminant. It was first isolated from a sink drain in a nail salon in Atlanta, Georgia as well as in a granulomatous subdermal lesion of a female in Venezuela.

There are two reported cases of patients both with indwelling delivery catheters and positive blood cultures for *M cosmeticum* – one being treated with antibiotics for urosepsis and discitis and the other with non-Hodgkin's lymphoma receiving aciclovir and cefipime via a central venous catheter. Neither received specific therapy for the mycobacterium and improved. Conversely, Rivera-Olivero *et al*⁵ reported species specific treatment in a report of non-tuberculous mycobacterial infection occurring in 81.6% of their cohort following mesotherapy, one of the isolates being *M cosmeticum*. At present there is no recommended antibiotic regime deemed most appropriate for this infection.⁶

CONCLUSION

We believe that this is the first reported case of *M cosmeticum* as a cause of ascites. There is a significant possibility that this was clinical infection. The ascitic total protein was elevated and the ascites cleared rapidly and remained in remission 1 year after treatment was commenced. Abdominal NTM is potentially overlooked as a contaminant because of its rarity and non-specific symptoms. It should be considered a potential pathogen in anyone who is immunocompromised with ascites, abdominal pain, fevers and weight loss. It remains unclear whether treatment is required, however, in the case of a symptomatic immunocompromised patient, one would be reluctant to hold off on initiation of treatment.

Learning points

- ▶ Recognition of this and other mycobacterial organisms as a cause of infected ascites is important, and new cases should be reported in the literature.
- ▶ Further investigation into the antibiotic sensitivities of *Mycobacterium cosmeticum* is required to guide treatment.

Competing interests None.

Patient consent Obtained.

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