Amoebiasis

INTRODUCTION

- Amoebiasis is caused by the protozoan parasite Entamoeba histolytica with transmission occurring via the faecal-oral route.
- Infection occurs worldwide but is more common in countries with poor sanitation.
- Acute amoebiasis can present with diarrhea and dysentery with chronic cases presenting with gastrointestinal symptoms and fever.
- Extraintestinal amoebiasis occurs when the parasite spreads to other organs, commonly the liver, causing amoebic liver abscesses.

HISTORY

- A 56 year old gentleman presented with fever, lethargy, myalgia, right upper quadrant pain and diarrhoea following travel to India and Thailand four weeks ago.
- He had travelled to Delhi for eight days and then to Thailand for 23 days.
- Whilst in India he became unwell with diarrhoea which resolved without treatment.
- He developed symptoms six days after returning.
- He gave no exposure history to animals.
- He stayed in hotels whilst travelling and ate local foods.
- He did not take malaria prophylaxis.
- Right upper quadrant tenderness was noted on examination.
- The differential diagnosis included dengue, typhoid, amebic hepatitis.
- He was commenced initially on empirical Ceftriaxone 2g once daily.

INVESTIGATIONS AND MANAGEMENT

- An ultrasound scan of his abdomen demonstrated multiple hypoechoic areas within the liver with a mixed solid and cystic consistency, suggestive of possible amoebic or pyogenic abscesses.
- A subsequent computed tomography (CT) scan revealed an enlarged liver with at least eight focal lesions within both lobes, the largest of which measured up to 6cm (Figure 2).
- One such lesion was located in the left lobe, close to the pericardium (Figure 1).
- Images were in keeping with multiple pyogenic hepatic abscesses.
- Amebic serology was negative and a diagnosis of pyogenic liver abscess was initially favoured due to the presence of multiple liver abscesses.
- FEVERS
- Lesions resolved rapidly following the addition of oral metronidazole (Graph 1).
- Given the diagnostic uncertainty and the possibility of rupture into the pericardium, ultrasound-guided drainage was carried out on six of the lesions over the following few days.

- Standard bacterial cultures and 16sRNA testing of the pus samples were negative.
- PCR testing for Entamoeba histolytica on the pus samples was positive.
- Repeat amebic serology, taken one week later, was positive.
- Treatment was rationalised to oral metronidazole and he received six weeks of therapy due to the extent of disease.
- Treatment with paromomycin followed for ten days for intra-luminal clearance.
- Repeat ultrasound imaging of his liver, five months after initial presentation, showed complete resolution of liver abscesses.

- This is an unusual case of invasive Entamoeba histolytica infection resulting in multiple abscesses and negative initial amebic serology.
- Drainage is not typically required in the management of amoebic liver abscesses but was performed in this case given the diagnostic uncertainty and the presence of a large intra-cardiac abscess.

ACKNOWLEDGEMENTS

- We would like to thank the patient for giving consent for his images to be used.

REFERENCES

2. World Health Organisation 2017

DISCUSSION

- Patients with amoebic liver abscesses usually present at a median of 12 weeks following travel from an endemic area.
- Characteristic features are right upper quadrant pain and fever.
- Rupture of liver abscesses can occur into any adjoining space or organ.
- Ultrasonography demonstrates solitary lesions in 70-80% of cases but multiple lesions have been noted previously.
- Localization in the left lobe predisposes to extension into the pericardial sac.
- Typically lesions are hypoechoic in nature.
- Serological testing may be negative in the first seven days.
- Aspiration is not routinely required but may be warranted if the cyst appears to be at imminent risk of rupture or if there is a lack of response to empirical therapy.

CONCLUSIONS

- This is an unusual case of invasive Entamoeba histolytica infection resulting in multiple abscesses and negative initial amebic serology.
- Drainage is not typically required in the management of amoebic liver abscesses but was performed in this case given the diagnostic uncertainty and the presence of a large intra-cardiac abscess.

BLOODS

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<th>C-reactive protein (mg/L)</th>
<th>Bilirubin (umol/L)</th>
<th>Alkaline phosphatase (IU/L)</th>
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- Cost benefit analysis of empirical Ceftriaxone 2g once daily was not carried out.

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