March 2015

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CASE REPORT

Sarcoidosis presented as retroperitoneal and lung mass

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Accepted 26 February 2015

SUMMARY

Sarcoidosis is a multisystem granulomatous disorder of unknown aetiology characterised pathologically by the presence of non-caseating granulomas in involved organs. Sarcoidosis most frequently involves the lungs followed by eye and skin. Presentation as retroperitoneal and lung mass is rare in sarcoidosis. We describe an unusual case of sarcoidosis where the patient presented with large retroperitoneal and lung masses, and was treated as tuberculosis.

BACKGROUND

Sarcoidosis is a chronic granulomatous inflammatory disease of unknown aetiology that commonly involves the lungs, lymph nodes, eyes and skin;[1] rarely, other organs and systems of the body can be involved. Clinically, it can mimic tuberculosis (TB), the differentiating feature being caseation necrosis in the granulomas in TB, but not in sarcoidosis. Retroperitoneal and lung masses are very rare presentation of sarcoidosis.[2 3]

CASE PRESENTATION

A 53-year-old man, residing in Ghotki, presented with a 4-month history of epigastric pain, and weight loss (4–5 kg) and generalised weakness for 3 months. There was no history of fever, nausea, vomiting, cough or chest pain. He was diabetic, hypertensive and had been diagnosed with hepatitis C chronic liver disease although he took no medication. He was not on any regular medications. There was no history of TB.

On physical examination, there was a palpable mass in the epigastric region; rest of the examination was unremarkable.

INVESTIGATIONS

The patient's baseline complete blood counts showed haemoglobin of 10.8 g/dL, haematocrit 32.2%, in serum electrolytes sodium 135 mmol/L, potassium 4.2 mmol/L, creatinine 1.4 mg/dL, his serum calcium level was 6.9 mg/dL, serum albumin 2.3 g/dL and liver function test showed total bilirubin of 0.4 mg/dL, γ-glutamyl transpeptidase level 271 IU/L, alanine aminotransferase 18 IU/L and alkaline phosphatase of 231 IU/L. Ultrasound of the abdomen revealed a hyper echoic area of 4×4 cm in retroperitoneum behind the tail of the pancreas. The patient's chest X-ray showed rounded opacity in the right lower lobe of the lung (figure 1), so CT of the chest and abdomen was carried out, which showed a retroperitoneal mass of 6.1×5.3 cm and a mass 3.6×3.1 cm in the right postbasal segment of the lung with hilar and mediastinal lymphadenopathy (figure 2A–C). CT-guided biopsy of right lung mass and retroperitoneal mass was performed, as the lesions were accessible. Biopsy of the right lung mass was not conclusive as the tissue was necrosed, but the retroperitoneal mass revealed chronic granulomatous inflammation without caseation (figure 3). Tissues for fungal and acid-fast bacilli smear and culture were sent; which were ultimately found to be negative. Differential diagnoses of TB and sarcoidosis were made, and the patient was empirically started on anti-TB therapy (ATT). In the next 4-month period no improvement was noted clinically. Instead, on repeat imaging, a progressive increase in the size of the masses was observed. Subsequently, the patient's ACE levels were estimated to be 87 iu/L. He underwent repeated biopsy through video-assisted thoracic surgery (VATS) to rule out any malignancy, but it again revealed marked chronic granulomatous inflammation without any caseation.

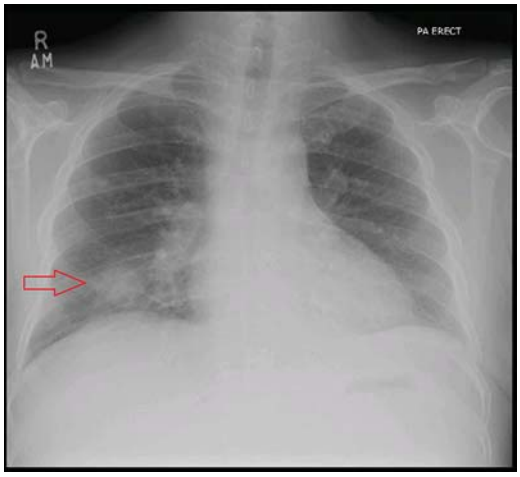

Figure 1 Chest X-ray showing solitary mass in right lower zone.

DIFFERENTIAL DIAGNOSIS

- Malignancy, as the patient presented with a mass in lungs and retroperitoneum
- Sarcoidosis
- Fungal infections
- Rheumatoid diseases
- Vasculitis
- Crohn's disease

TREATMENT

The patient was started on corticosteroids 40 mg daily with a presumptive diagnosis of sarcoidosis.

To cite: Iqbal N, Mahmood A, Irfan M, *et al*. *BMJ Case Rep* Published online: [*please include* Day Month Year] doi:10.1136/bcr-2014-207176

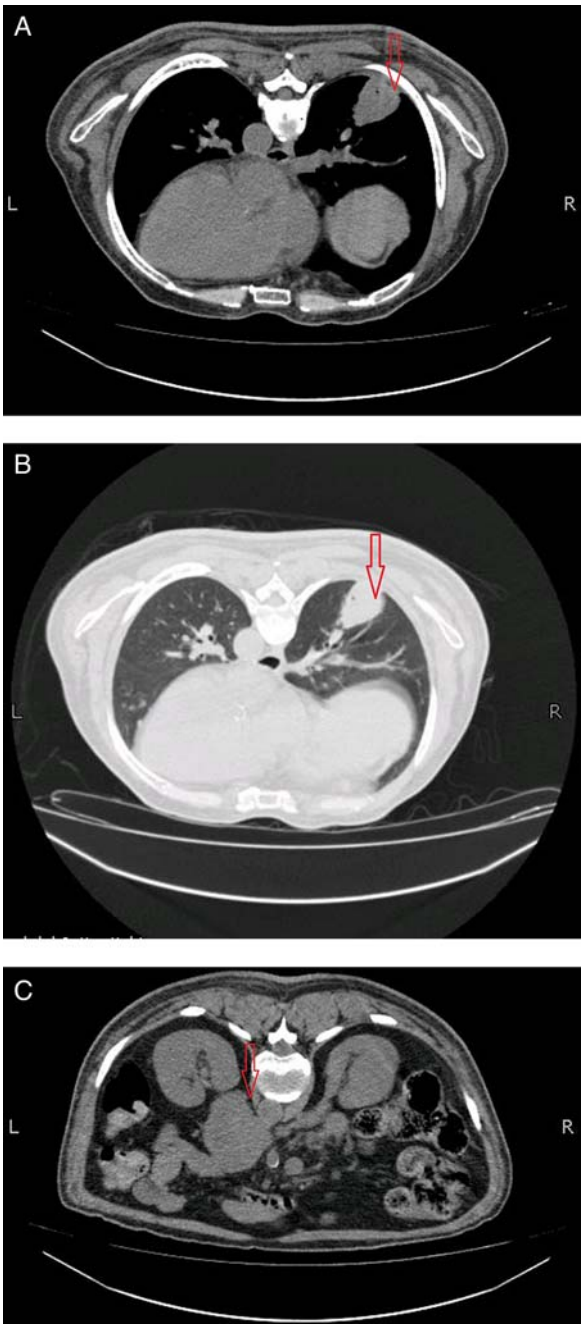

Figure 2 (A) CT of the chest mediastinal window showing right lung mass. (B) CT of the chest lung window showing right lung mass. (C) CT of the abdomen showing retroperitoneal mass.

OUTCOME AND FOLLOW-UP

The patient showed a dramatic improvement of symptoms and significant decrease in the size of the masses after a month of corticosteroids. He took prednisolone for a total duration of 1 year.

DISCUSSION

To the best of our knowledge, there has been no case report on such presentation of sarcoidosis. Sarcoidosis is a chronic granulomatous inflammatory disease of unknown aetiology that can involve any part of the body. The most commonly involved organs are the lungs, lymph nodes, eyes and skin.[1] Incidence of extrapulmonary sarcoidosis is approximately 30%.[4] In pulmonary sarcoidosis, hilar lymphadenopathy is common with a variable course from asymptomatic to, very rarely, chronic progressive disease. However, its presentation as a lung mass is quite uncommon.[2] As sarcoidosis is also associated with constitutional symptoms such as weight loss, fatigue, fever and lymphadenopathy, TB always remains a differential. In abdominal sarcoidosis, the liver and spleen are commonly involved viscera.[5 6] Our patient presented to us with lung as well as retroperitoneal masses, and pulmonary and abdominal involvement, which was rather atypical. Pulmonary involvement in the form of a localised mass in the right lower lung was present, which was asymptomatic. Another mass was detected retroperitoneally in the upper abdomen, which was causing unbearable pain in the epigastrium. Constitutional features including fever were almost absent. ATT was given for a considerable period of 8 months, but the patient's overall condition deteriorated. The alternate possibility of sarcoidosis was considered, supported by raised ACE levels and non-caseating granulomas found on a second VATS biopsy from the pulmonary lesion.

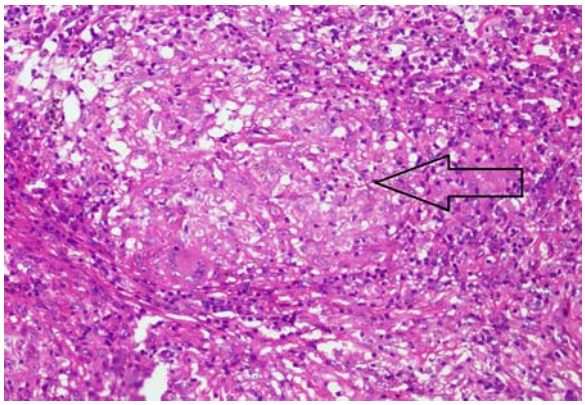

Figure 3 Histopathology of retroperitoneal mass showing chronic granulomatous inflammation without caseation.

Learning points

- Diagnosis of sarcoidosis always remains a dilemma as no confirmatory test is available to date.
- Second, it closely mimics tuberculosis (TB), which is rampant in countries such as Pakistan and is probably overdiagnosed and misdiagnosed in many patients.
- Presentation of sarcoidosis as lung and retroperotonial masses is very rare, however, it should be considered in patients with chronic granulomatous inflammations not responding to anti-TB therapy.
- Importantly, every chronic granulomatous inflammation is not TB.

Acknowledgements The authors wish to thank Dr Rashida Ahmed, Histopathologist, Aga Khan University Hospital.

Contributors NI performed the literature search and helped in writing the manuscript. AM wrote the manuscript. MI reviewed the manuscript and the case. KM reported on the histopathology.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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