Primary emphysematous adrenal hydatid: Unusual site for presentation with rare pathology

Gaurav Prakash, Apul Goel, Satyanarayan Sankhwar

Department of Urology, King George's Medical University, Lucknow, Uttar Pradesh, India

ABSTRACT

Hydatid disease of the adrenal gland is uncommon. We present images and description a case of emphysematous hydatid cyst of the adrenal gland that had an unfavourable intraoperative outcome.

Key words: Adrenal, emphysematous, hydatid

A 35-year-old farmer presented with a mass, dull aching right flank pain and intermittent fever for 4 months. Local examination revealed an ill-defined mass approximately 15 cm × 10 cm over right flank region which was firm and nontender. Blood and urine examination were normal. Computed tomography (CT) scan abdomen [Figure 1] revealed approximately 16 cm × 14 cm heterogeneous enhancing space occupying lesion with multiple internal nodules, and calcified cystic areas with multiple air specks involving the right adrenal gland. The lesion is adherent to the inferior vena cava (IVC) and displacing the right kidney inferiorly. Urine vanillylmandelic acid and metanephrines were normal. Assuming it to be a case of adrenal hydatid cyst, oral albendazole 800 mg once a day was prescribed for 2 weeks. Exploratory laparotomy with right anterior subcostal incision revealed a mass that was completely involving the adrenal gland and densely adherent to the IVC and other adjoining structures. During mobilization, the mass ruptured, revealing infected hydatid cysts. The IVC was injured during dissection, resulting in profuse hemorrhage. The patient went into hypotension, probably as a result of both hemorrhage and anaphylactic reaction from the ruptured cystic fluid. He died on the day of surgery. Although adrenal hydatid is infrequently reported in literature and constitutes less than 1% of all hydatid cases,[1] emphysematous infection of hydatid cyst has not been reported to the best of our knowledge. Patients remain asymptomatic for a long time due to slow progress of the disease. Blood examination such as ELISA or IgE test do not help in diagnosis due to low sensitivity and specificity. Radiology has an important role in preoperative diagnosis of adrenal masses.[1] Calcification and septation suggest a parasitic etiology.[2] In our case, in addition to this, multiple air pockets were found inside the cyst. In the genitourinary tract, emphysema has been associated with pyelonephritis, cystitis, and gas forming renal abscess. The cause of gas formation is acid fermentation by gas-forming bacteria. In our case, the cause of emphysema was not

For correspondence: Dr. Apul Goel,
Department of Urology, King George's Medical University,
Lucknow - 226 003, Uttar Pradesh, India.
E-mail: drapul.goel@gmail.com

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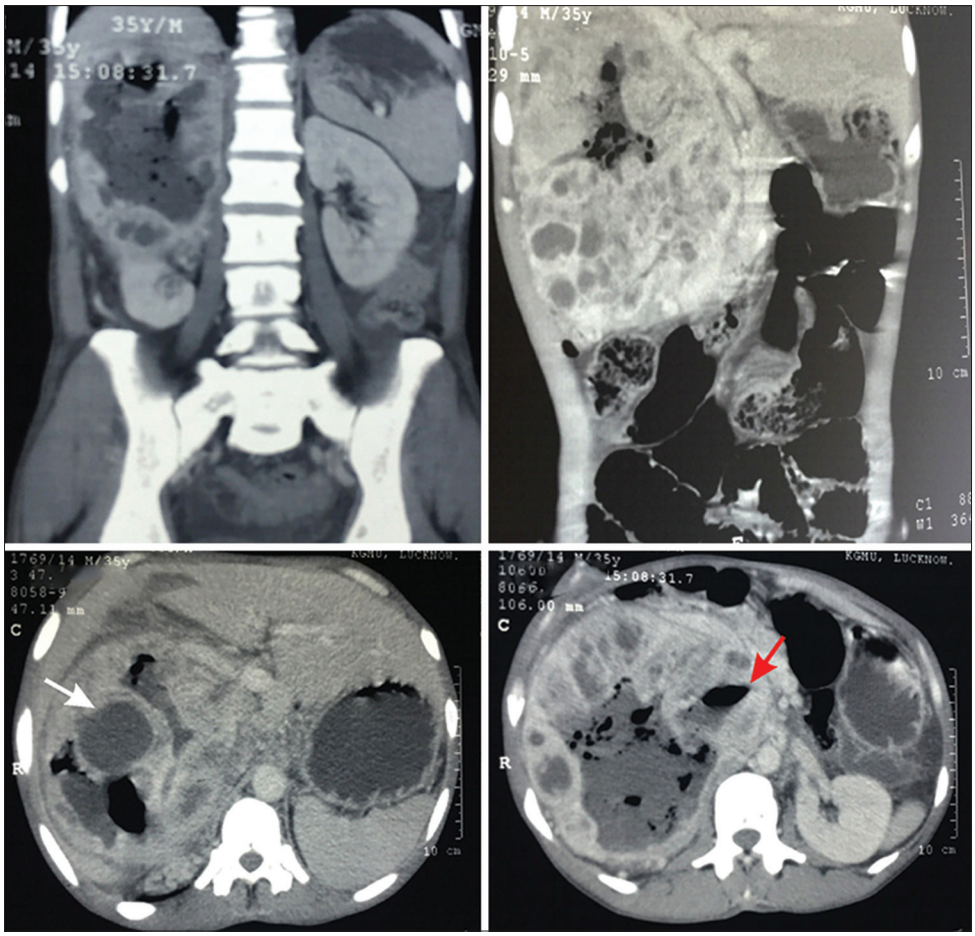

Figure 1: 16 cm×14 cm heterogeneous enhancing space occupying lesion with multiple calcified (white arrow) internal nodules in the adrenal gland, adherent to the inferior vena cava and displacing the kidney with multiple air specks (red arrow) inside

clear and this might be due to secondary infection by gas-forming bacteria. Exploration and excision with or without preservation of the adrenal gland remain the mainstay for the treatment of hydatid. Although adrenal hydatid is a benign condition, the reported perioperative mortality of adrenalectomy ranges between 2% and 4% for adrenal tumors.[3]

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Conflicts of interest

There are no conflicts of interest.

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