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Case report

Large adrenal pseudocyst. A case report

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Abstract

Authors report a case of large adrenal pseudocyst in a 53 year-old woman. A voluminous abdominal mass with malnutrition and dehydration symptoms were found. Surgical excision was difficult but complete after 6L fluid aspiration. Histologic examination showed fibrous and inflammatory cystic wall with groups of adrenal cells. No epithelial lining was present and the diagnosis of adrenal pseudocyst was made. Pathogenesis, histology, diagnosis and management were discussed.

Keywords: Adrenal gland; Pseudocyst; Surgery

Volumineux pseudokyste surrénalien. A propos d'un cas

Résumé

Les auteurs rapportent un cas de pseudokyste volumineux de la surrénale gauche chez une femme de 53 ans se manifestant par une énorme voussure abdominale associée à des signes de dénutrition et de déshydratation. L'exérèse complète, difficile, avait pu être pratiquée après évacuation de six litres de liquide. L'histologie montrait un amas fibro-inflammatoire avec des îlots de cellules surrénaliennes et l'absence de bordure épithéliale, concluant en un pseudokyste. Les aspects étiopahogénique, anatomo-pathologique, diagnostique et thérapeutique sont discutés.

Mots clés: Chirurgie; Glande surrénale; Pseudokyste

Introduction

Adrenal pseudocysts are rare. They are usually asymptomatic and can reach large volume [1]. We report herein the case of a female patient who had a huge left adrenal gland pseudocyst.

Case presentation

A 53 year-old woman presented a voluminous abdominal mass with malnutrition and dehydration symptoms. Three-months earlier, she discovered a left painful hypochondrium mass. Mass size quickly increased and after 3 months, it occupied all of the left abdominal side. Gastric and intestinal compression signs appeared progressively at the same time. There were frequent vomiting, important weight loss (15kg in one month), and subocclusion episodes. She had a 6-months medical history of mild hypertension (150 > 90mmHg) treated by Captopril 25mg twice a day. She did not notice any abdominal nor lumbar trauma. She has been menopausal for 3 years. On clinical examination, a voluminous mass occupied a large portion of the left abdominal part. Abdominal ultrasonography revealed a 28x20cm unilocular cystic mass surrounded by a thick wall (11mm). Computed Tomography (CT) was not done because of financial difficulties. Laboratory tests showed anemia (10g/100mL hemoglobin). Serum cortisol and urinary vanillylmandelic acid were normal. Exploring laparotomy was performed by a xyphopubian incision. A huge cystic mass (28x20x18cm) in the left retroperitoneum was found pushing transverse colon and left kidney in front of it and small intestine into the right side of the abdomen (Figure 1). Initial aspiration of the cyst yielded 6L of yellow fluid. Complete excision was possible but

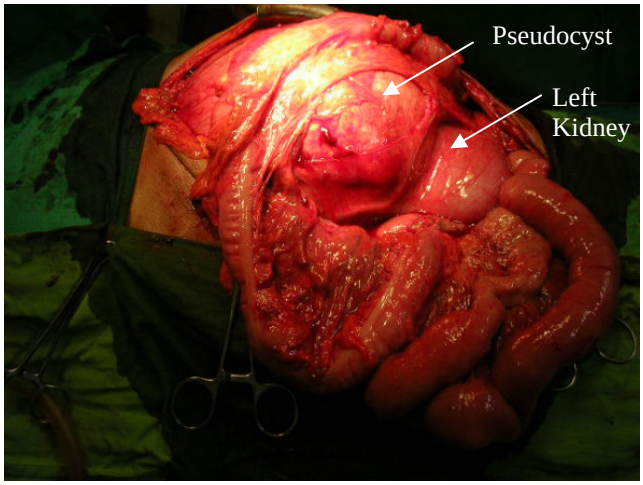

Fig. 1: Exploring laparotomy: huge cystic mass (28x20x18cm) in the left retroperitoneum

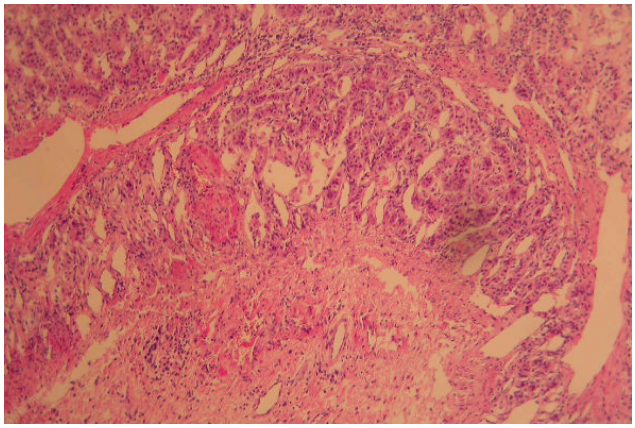

Fig. 2: Histology: fibrous adrenal pseudocyst (Hematoxilin-Eosin x100)

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difficult due to cystic capsule adherences. Pathological examination showed a thick wall (11mm) consisted of dense fibrous tissue with no lining epithelium. Adrenal cells were found scattered in and the diagnosis of an adrenal pseudocyst was made (Figure 2). Postoperative course was uneventful and blood pressure normalized without Captopril. There was no recurrence after three years follow-up.

Discussion

Adrenal pseudocysts are rare and represent about 80% of cystic adrenal masses [1,2]. They occur at any age but most of the patients are young or middle aged adults [3]. The pathogenesis is not well understood, but organization of prior glandular hemorrhagic or infectious process has been suggested [3].

Pseudocysts are generally unilocular, surrounded by a thick wall, less than 10cm in diameter and contain yellow or hemorrhagic fluid [3]. Nevertheless, most voluminous cases measuring more than 30cm have been described [3]. Bilateral lesions are exceptional [3]. Histologically, the capsule is thick and densely fibrous. It contains fibrin, necrotic debris, and sometimes adrenal cortical cells, without epithelium or endothelium lining [1]. Other adrenal tumors such as pheochromocytoma, adrenocortical carcinoma, adenoma or neuroblastoma may be associated with pseudocysts [2,5]. Other cystic adrenal masses such as endothelial cysts, epithelial cysts, parasitic (hydatid) cysts, cystic pheochromocytoma or cystic degeneration in adrenal malignancy represent the differential diagnosis [1,2,5].

Immunohistochemistry shows a strong expression of factor VIII-related antigen, laminin, and CD34 in the absence of epithelial membrane antigen or keratin expression. These findings also suggest the vascular origin in the pseudocysts pathogenesis [1,4,6,7]. Symptoms depend on tumor size. Huge pseudocysts give increased abdominal volume and compression-related symptoms such as lumbar pain, nauseas, vomiting, constipation, and sometimes hypertension [1,2,8]. This compression-mediated hypertension disappears after cyst removal, as seen in our case [1].

Complications such as traumatic rupture or intracystic hemorrhage were reported in some large cysts, leading to shock or voluminous retroperitoneum hematomas [2,8]. Nevertheless, the majority of adrenal pseudocysts are asymptomatic and incidentally seen on routine imaging or at autopsy [8,9]. Ultrasonography, CT scan, and magnetic resonance imaging show thickening of the pseudocapsule. Heterogeneous areas within the cyst may be suspect of malignancy and are the result of intracystic hemorrhage [10].

Surgical excision is usually easy [3]. However, it may be difficult in large size pseudocysts, as in our case. Initial cyst fluid evacuation often facilitates its removal. Outcome and evolution are excellent.

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