Abstract:
Non functioning adrenal lesions include cortical adenoma, myelolipoma, cyst, ganglioneuroma, haemorrhage and metastasis. They do not secrete any hormones. They are also called as incidentalomas since most of the times, they are discovered during imaging performed for unrelated reasons. Non functioning adrenal lesions less than 4cm with benign imaging characteristics are managed conservatively. Lesions greater than 4cm with suspicion of malignancy in imaging studies are treated surgically. Here we are reporting a rare case of adrenal pseudocyst, which was successfully managed by surgery.

Keyword: ADRENAL PSEUDOCYST, NON FUNCTIONING ADRENAL LESION

Patient details:
A 42 year old male patient admitted with the complaint of excessive urination for 1 month duration. There was no frequency or urgency or dysuria. There were no other genitourinary or gastrointestinal symptoms. He had no history of co-morbid illness or previous surgery. Clinical examination of abdomen and other systems were normal. Ultrasonogram abdomen detected cystic lesion in the right adrenal gland. CECT of abdomen showed well defined thin walled cyst in upper pole of right kidney and reported as right adrenal cyst. CT angiogram confirmed CECT ABDOMEN & CT ANGIOGRAM Biochemical parameters were normal. Complete hemogram and renal function tests were normal. 24 hours urine cortisol-50 g (20-70 g/24 hours), plasma adreno cortico tropic hormone-20pg (6-76pg/ml), serum cortisol-5 g (0-10 g/dl), 24 hour urine vanilyl mandelic acid-4mg (<6mg/24hours), 24 hour urine metanephrine-100 g (53-367 g /g creatinine), plasma aldosterone-5ng(2-9ng/dl).
Since the adrenal cyst was large (8×6cm), surgery was planned. Right adrenalectomy was done (Open anterior approach). Perfect hemostasis achieved. Postoperative period was uneventful.

**DISCUSSION:**

Adrenal pseudocyst is a benign non-functioning adrenal lesion which does not secrete any hormone. It is the most common adrenal cyst. It commonly occurs in 4th to 6th decade. It is more common in women. Etiology is controversial and believed to be vascular or lymphatic anomaly. It is usually asymptomatic. It may present with flank pain or epigastric discomfort. It is usually unilateral.

Adrenal pseudocyst is characterised by fibrotic wall without well-defined endothelial lining. It is usually uniloculated which often contains abundant acellular proteinaceous debris. Its size may vary from few centimetre to 30 centimetre. It may contain clotted blood or degenerated thrombus (haemorrhagic cyst). Haemorrhagic cyst may be associated with Beckwith Wiedemann Syndrome. Factor VIII highlights endothelial cell lining in true cyst which helps to differentiate pseudocyst from true cyst. The differential diagnosis for adrenal pseudocyst is adrenal myelolipoma.

CTE abdomen is very useful in the diagnosis of adrenal pseudocyst. Plasma adreno corticotropic hormone, serum cortisol, 24 hours urine cortisol and low dose dexamethasone suppression test are essential to rule out subclinical cushing syndrome. 24 hours urine vanillyl mandelic acid, metanephrine and catecholamines are useful to rule out pheochromocytoma. Plasma aldosterone and plasma renin are essential to rule out aldosteronoma.

Pt is on regular follow up for past 1 year without any symptoms.
Adrenal pseudocyst $<4\text{cm}^1$ will be treated conservatively with periodic follow up every 6 months using imaging studies. Lesions $>4\text{cm}^1$ will be treated surgically. Laparoscopic adrenalectomy is the standard choice for excision of benign adrenal lesions $<6\text{cm}$. Open anterior approach is indicated in large tumours $>8-10\text{cm}$. Other open approaches are open posterior and thoraco-abdominal approach.

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