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RESEARCH ARTICLE

EXPLORATORY LAPAROTOMY & PARTIAL ADRENALECTOMY

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ABSTRACT

Rare Clinical presentation of spontaneous adrenal hemorrhage (hematoma) with acute severe loin pain in a 46yrs female managed surgically with exploratory laparotomy & partial adrenalectomy.

INTRODUCTION

Aim: Surgical management of a spontaneous adrenal hemorrahge (hematoma) presentated with acute severe loin pain in the form of exploratory laparotomy & partial adrenalectomy.

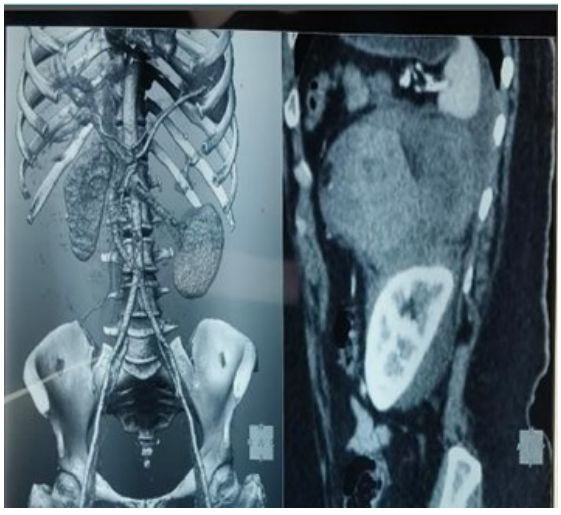
METHODS

A 46yrs old female presented to urology OPD with complaints of acute severe left loin pain & nausea since 01 day. No h/o fever, vomiting & Hematuria. Severe tenderness in left lumbar region. H/o LSCS. No H/O any major surgery in past. No H/O comorbidities.

USG: Large heterogeneous lesion with fluid echogenicity in left supra renal region --- DD:- left adrenal mass with hemorrhage or /? nature. Minimal fluid in left perinephric region.

USG

CECT Abdomen:- Large heterogenous mixed attenuation hemorrhage size of 115 x 135 x 90mm in left suprarenal region



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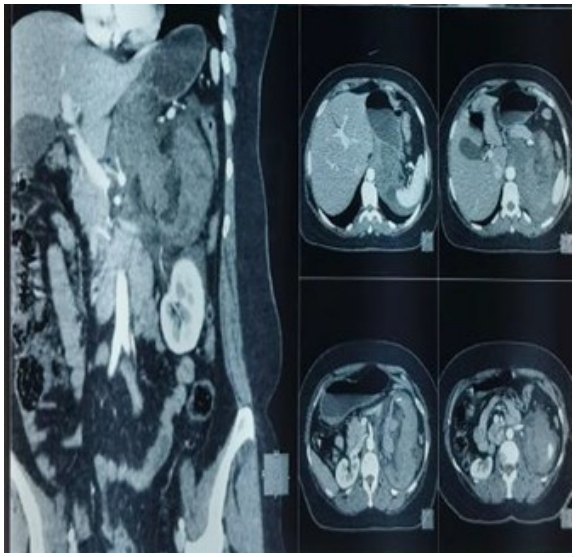
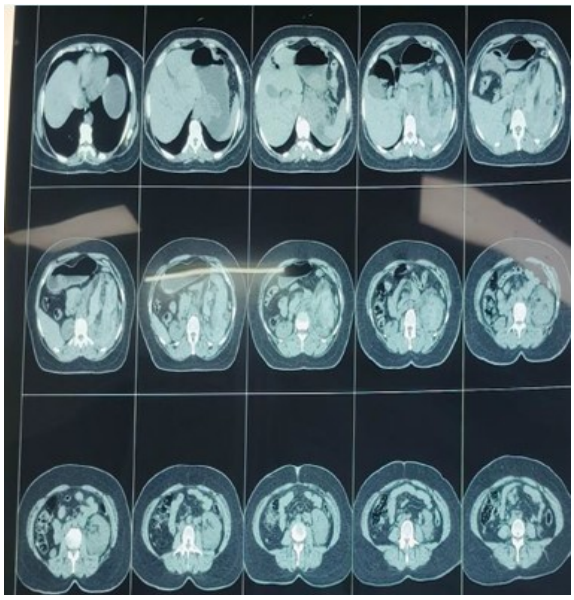
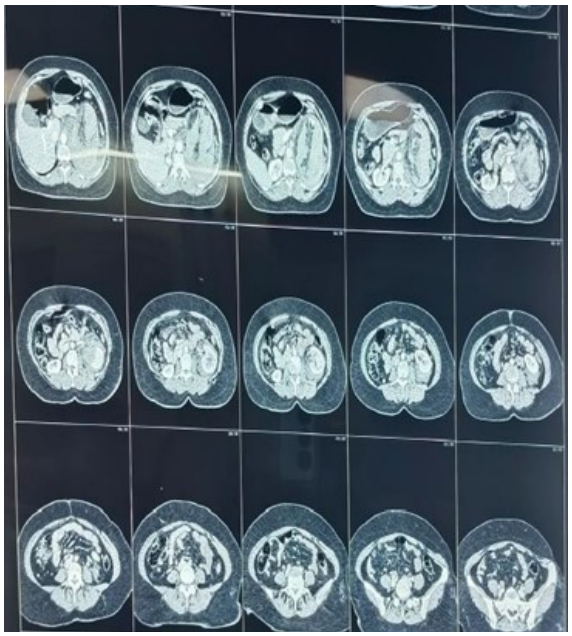
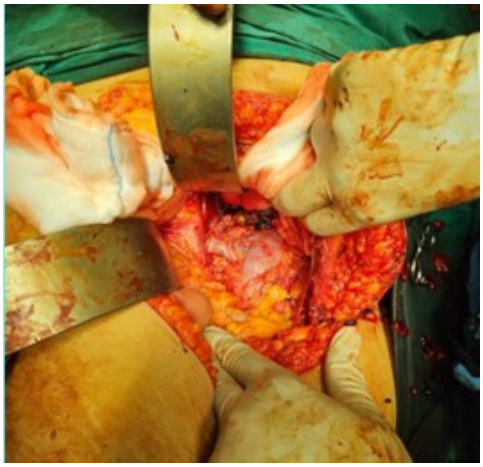






with abnormal torturous enhancing tubular and round enhancing vessels measuring about 8.0mm in anterior part likely ruptured pseudoannurysm / vascular malformation, extension of hemorrhage in left perinephric and adjacent retroperitoneal spaces with anterior displacement of left kidney.

Surgical Management: Emergency Exploratory laparotomy was planned, Patient in supine position, sterile painting and drapping done, left subcostal incision given, abdomen opened in layers, peritoneum opened, left kidney identified, displaced inferiorly & laterally, descending colon mobilised medially, large hematoma present at left suprarenal region, hematoma mobilized and evacuated gently, approx 400cc hematoma evacuated, bleelder point identified, partial adrenalectomy done. Bleeder suture ligated. Hemostasis achieved, drain placed and fixed at perinephric space, abdomen closed in layers, skin stapler applied, procedure was uneventful & patient was discharged on full oral diet on day 04.



DISCUSSION

Unilateral spontaneous adrenal hemorrhage is an uncommon surgical emergency that can present as massive retroperitoneal hemorrhage and is potentially fatal. Its causes include severe physical stress, infection, bleeding disorders, use of anticoagulants, procedures, and tumor bleeding. Stress can develop due to recent surgical procedures, organ failure, sepsis, or pregnancy, none of which are mutually exclusive. Recognizing the importance of adrenal hemorrhage is particularly essential given the customary use of anticoagulants and the introduction of agents such as dabigatran. Adrenal hemorrhage may cause complications for procedures such as adrenal vein catheterization andbiopsy Although acute adrenal hemorrhage within an adrenal mass is most commonly observed in cases of pheochromocytoma, it has also been described in patients with myelolipoma, metastatic lesions, adrenocortical carcinoma, adenoma, or hemangioma. The clinical features of adrenal hemorrhage are nonspecific, including abdominal pain, nausea, vomiting, hypotension, hypertension, low-grade fever, agitation, and decreased ematocrit. Large bilateral hemorrhage will affect adrenal function severely enough to lead to adrenal insufficiency. Consequently, imaging examinations play a fundamental role in diagnosis and, consequently,in the proper careof patients. The imaging findings of adrenal hemorrhage are diverse and vary according to the time elapsed between the onset of bleeding and the imaging examination. In this context, several patterns have been described, including homogeneous or heterogeneous solid masses, masses with central liquid density, and retroperitoneal infiltration. Although some of these patterns are diagnostic of adrenal hemorrhage, the appearance of a solid mass may be easily confused with adrenal neoplasia, particularly in a setting in which prior examinations are not available for comparison. A mass with no calcified enhancement, a hemorrhagic pseudocyst, or an area of adrenal gland atrophy can be seen during the chronic bleeding phase, and complete spontaneous resolutionisnotuncommon.

Acute hemorrhage is characterized by the development of a mass, with hypoattenuation or heterogeneous attenuation, that fails to present enhancement after the infusion of contrast, in one or both of the adrenal glands. In most cases, normal adrenal enhancement is preserved and will often be distributed Other features that may be observed in acute adrenal hemorrhage include periadrenal infiltrate, active extravasation with retroperitoneal bleeding, and preservation of the normal shape of the adrenal gland. Noncontrast CT may be performed when there is clinical suspicion of adrenal hemorrhage or any contraindication to the intravenous administration of contrast, which may show an increase in adrenal volume with attenuation greater than that of the liquid, as well as periadrenal infiltrate.

In cases of adrenal hemorrhage, the bleeding is often continuous until the gland expands beyond its normal shape, and a rounded or oval hematoma forms around the gland. Such hematomas vary in size from a few centimeters to more than 10 cm. On CT, they are characterized as circular masses with no contrast enhancement and attenuation greater than thatofthe liquids. Insomecases Well-known granulomatous diseases, such as tuberculosis and histoplasmosis, may also present imaging manifestations similar to those of adrenal hemorrhage. When there is suspicion of adrenal disease in a patient with retroperitoneal hemorrhage, hemodynamic monitoring, preferably in an intensive care unit, is recommended. In patients with active bleeding, angiographic embolization is a valuable tool to achieve hemostasis. If the patient remains hemodynamically stable and asymptomatic after embolization, immediate surgical exploration is not necessary. However, if the condition of the patient deteriorates, surgical options should be considered

CONCLUSION

Adrenal hemorrhage is a rare clinical condition, with potentially fatal consequences due to acute adrenal insufficiency. Early diagnosis of acute adrenal insufficiency is crucial in order to administer the appropriate therapy in a timely manner. It could be useful to recognize the CT findings described here-including that of a mass, with 45-65 HU of attenuation and without enhancement in the contrast phases, that alters the usual anatomy of the gland-as indicators of adrenal hemorrhage. However, given the limitations our study, specifically the small sample size, further, prospective studies are needed in order to corroborate our findings.

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