GIANT ADRENAL INCIDENTALOMA- REPORTING A RARE CASE
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ABSTRACT

BACKGROUND
We report a rare case of large retroperitoneal mass arising from left adrenal gland which presented as incidentaloma on investigations was found to be giant encapsulated lipoma in the region of left adrenal gland. A 80 year old male was operated upon, the entire tumour measuring 30*25*12 cm was successfully excised into preserving all the surrounding vital structures including pancreas, stomach, kidneys, aorta and spleen. Intention of reporting this case is the rarity of occurrence of adrenal lipomas-ranging from 0.4%-4% of adrenal tumours- and the size of the tumours- by far the largest reported in literature.

KEYWORDS
Adrenal Incidentaloma, Retroperitoneal Lipoma.


CASE HISTORY
A 80 year old male presented to surgical opd with USG abdomen suggestive of abdominal lipoma, patient had no abdominal symptoms like post prandial fullness or pain. He had an USG done on advise by general physician for complaints of back pain. He was further evaluated with CT abdomen which showed large irregular heterogenous fat density mass (~100 to -15 HU) in left retroperitoneal lesion- left adrenal not separately seen extending from diaphragm to umbilical level, lesion was situated posterior to and abutting pancreas displacing stomach antero-superiorly left kidney inferiorly, bowel loops including descending colon towards right side, size about 199 mm*204 mm*170 mm suggestive of left adrenal lipoma / fibrolipoma.

Patient was evaluated for hormone secreting tumour by doing 24 hr urine metanephrine, early morning serum cortisol after dexamethasone suppression test, the results were within normal limits.

Patient was known hypertensive on treatment with losartan. On examination patient had a palpable abdominal mass in left lumbar region extending to the level of iliac crest, non tender, not bimanually palpable.

Patient was taken up for surgery after control of hypertension, and necessary pre-op work up under combined general and epidural anaesthesia. Midline transperitoneal incision taken and peroperatively tumour was found to be extending from diaphragm to surface to the level of aortic bifurcation in longitudinal plane, from lateral wall to crossing midline in transverse plane, with spleen, Pancreas pushed to antero superiorly , left kidney pushed to inferolaterally, transverse colon and splenic flexure splayed over tumour mass. Descending and
transverse colon mobilized to right side, the entire capsulated tumour mass excised after ligating the left adrenal vessels and dividing the fibrous adhesions to superior pole of displaced left kidney.

The resected specimen is weighed 3.5 kgs. Patient had uneventful postoperative recovery and discharged on POD 10 and reviewed after 6 weeks, patient doing fine.

Histopathology report: Suggestive of simple large encapsulated soft tissue mass measuring 26 *18*8 cm, external surface smooth lobulated greasy yellow in colour with few prominent veins. Microscopic examination reveals dominantly large sheets of adipose tissue along with areas of partly autolysed fibrous tissue few inflammatory cell foci and occasional congested blood vessels, no necrosis and atypical cells or viable adrenal tissue could be identified. No immature haemopoietic cells seen. Excised retroperitoneal tumour shows features of lipoma.

**CECT Abdomen- Transverse Cuts**

**Figure 1**

**Figure 2**

**Figure 3**

**Intraoperative Photographs**

**Figure 4**

**Histopathological Slides**

**Figure 6**

**Pathological Gross Specimen**

**Figure 7**

**Figure 8**
DISCUSSION
Lipomas are common tumours arising from any organ in
the body as fat is present throughout the body but are
most often found in subcutaneous tissue of neck and
shoulders, chest and thigh. Rare sites of lipoma is in the
retro peritoneum, and adrenal gland. The patient we are reporting had a large lipomatous
tumour occupying almost entire left side of abdomen
displacing entire pancreas and spleen anterosuperiorly and
kidney posteriorinferiorly but without causing any pressure
effects except for vague back pain (?due to stretching of
pancreas) which was encapsulated and dissectible from all
the adjacent structures except for superior pole of kidney
to which it was densely adherent and had to be separated
by sharp dissection using electro cautery-which confirmed
the pre-operative suspicion of this being a adrenal tumour
(as reported on CT scan abdomen based on fat attenuation
values and absence of identifiable left adrenal gland).

Histological features were in favour of lipoma with
predominantly large sheets of adipose tissue with areas of
partly autolysed fibrous tissue, no necrosis or atypical cells
or viable adrenal tissue could be identified. This in contrast
to other case reports where a rim of adrenal cortex could
be identified. It is imperative to differentiate retroperitoneal
lipoma from adrenal lipoma preoperatively as the former-may harbour a lipoma while the latter may be subclinical
pheochromocytoma or adrenal cortical carcinoma- which
can reliably be done by using the new ubiquitous imaging
modalities like CT scan and MRI and screening for function
abnormalities of adrenal glands. Other case reports where a
rim of adrenal cortex could be identified.

Accounting for 4.8% of primary adrenal tumours, adrenal lipomatous tumours as rare and constitute
myelolipomas, angiolipomas, lipomas, teratomas,
liposarcoma. Of these adrenal lipomas comprise 4% of
lipomatous tumours or 0.7% of primary adrenal tumours.
They are usually asymptomatic non-functioning small
sized tumours ranging from 2-8 cm, unless growing to
large size when they may cause pressure symptoms like
dragging pain and rarely haematuria.

CT scan is quite reliable in detecting and diagnosing up
to 98% specificity due to presence of macroscopic fat
which gives attenuation values of less than 20 HU; similarly
with MRI which shows hyper intense signals on T1-W
images and chemical shift imaging (CSI) which can
diagnose intracytoplasmic lipid nodules which demonstrate
HU of 10 & 30.

Management depends on size of tumours >6 cm to be
surgically excised and <4 cm left alone patients with 4-6
cm to be considered for surgery based on other
characteristics such as heterogeneity on imaging
investigation. For small tumours laparoscopic route where feasible is the best method for excision followed by
posterior lateral retroperitoneal approach. While retaining
anterior trans abdominal route for very large tumours
which may require comitant procedures.

REFERENCES
[4] Zhao J, Sun F, Jing X, et al. The diagnosis and treatment of primary adrenallipomatous tumours in

In any case we could reach a definitive diagnosis pre
operatively with the help of CT scan and opted for midline
Trans peritoneal approach considering the large size and
important organs like stomach, pancreas and kidney it was
displacing. That proved to be the correct decision as
dissection of tumours from transverse colon, descending
colon and middle colic vessels wouldn’t have been possible
through posterior lateral approach.

Retroperitoneal lipomas are equally rare tumours.

(Reference: Review of literature throwing up contrasting reports with a 2014 study claiming only 17 described cases from 1980, while a 1953 dated published paper reporting about 300 cases up to 1947.)

The similarity with adrenal lipomas extends further in
their slow growth and late diagnosis until reaching a very
large size due to absence of specific symptoms and most of
them being encapsulated.

Surgery that is complete excision of the tumours is
indicated as some may harbour sarcomatous elements and
lipoma itself may be a presenting and visible part of
liposarcoma. Literature regarding tumour progression and recurrence
in long term following incomplete excision is unavailable.

In our case differential diagnosis of retroperitoneal
lipoma arises as adrenal tissue could not be identified by
the pathologist in multiple sections taken from all over the
tumour and was observed in all the case reports studied,
and there were no foci of haemorrhagic infiltrates, liponecrosis and infiltrates as reported in one of
the case study of giant adrenal lipoma.

CONCLUSION
Primary large abdominal lipomatous tumours though rare
and of doubtful aetiology are relatively easily diagnosed by
commonly available modern imaging modalities like
ultrasound and CT scan, require surgical intervention
preferably through a midline trans abdominal incision with
the aim of total excision and possible permanent cure.

ACKNOWLEDGEMENT
We are thankful to Dr. Zakiaabid, Professor and HOD pathology department and Dr. Anand Akkari, Professor and
HOD department of radiology for their valuable inputs.

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