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CASE STUDY

ANESTHETIC MANAGEMENT OF LEFT ADRENAL MYEOLIPOMA POSTED FOR LEFT ADRENALECTOMY

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ABSTRACT

Introduction: Adrenal myelolipoma is a rare benign tumor composed of mature lipomatous and hemopoietic tissue. It is often discovered as an incidental finding on imaging of the abdomen for some other reason or at autopsy. These are harmonally inactive. They are associated with a fluctuating clinical course during anaesthesia and surgical intervention.

Case report: A 64 year old male patient, ASA Grade II diagnosed to have left adrenal myelolipoma as evidenced by CT scan showing 7.6 X 7.8 X 6cm fat density lesion of left adrenal gland, posted for left adrenalectomy. The physical examination was unremarkable, Laboratory investigations revealed the non-functioning nature of the adrenal mass. Combined general anesthesia and epidural anesthesia was planned. Epidural catheter was inserted. Patient premedicated, sedated and induced. Intra-operative anesthetic management was uneventful except hemodynamic instability which was managed successfully. Patient was extubated after giving adequate reversal. Post-operative period was uneventful and post-operative analgesia was managed by epidural route.

Conclusion: The management of patients with Adrenal myelolipoma remains a challenge for the anaesthesiologist. Our role in the successful outcome of such surgeries begins from adequate pre-operative preparation, extensive intra operative monitoring and careful follow up during the post-operative period.

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INTRODUCTION

Adrenal myelolipoma is a rare benign tumor composed of mature lipomatous and hemopoietic tissue. It is often discovered as an incidental finding on imaging of the abdomen for some other reason or at autopsy. These are harmonally inactive. They are associated with a fluctuating clinical course during anaesthesia and surgical intervention.

Case Report

A 64 year old male patient, ASA Grade II diagnosed to have left adrenal myelolipoma as evidenced by CT scan showing 7.6 X 7.8 X 6 cm fat density lesion of left adrenal gland. The patient was scheduled for left adrenalectomy.

Initial presentation

The patient was known case of diabetes and hypertension and was reported to OPD with complaints pain abdomen since 3 months. Pain was throbbing type in the left lumbar region,

insidious in onset, intermittent in nature, radiating to left shoulder and not associated with any aggravating and relieving factors.

Local Examination

Inspection: No visible swelling, discolouration and visible pulsations. Hernial orifices intact and external genitalia normal.

Palpation: Local rise of temperature present, Tenderness present in left hypochondriac region Guarding present, No known swelling palpated.

Percussion: No signs of free fluid.

Auscultation: Bowel sounds present.

Systemic examination:

Vitals: Pulse -84pm B P -140/90mm of Hg.

RS: Bilateral normal vesicular breath sounds heard. CVS : S1 and S2 heard, no murmur.

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Investigations

- **Hemoglobin** : 12.3gm%
- **Total white blood cell count** : 10700 cells/cu mm.
- **Platelet count** : 2.71 lakhs/cu mm
- **Serum creatinine** : 0.8mg/dl
- **Serum sodium** : 132mmol/L and Serum potassium : 4.4 mmol/L
- FBS-115mg/dl, urine ketone bodies-absent
- Serum cortisol 9.61 mcg/dl (Normal 3.09-16.66)
- **Urinary metanephrine**: 88.12mcg/24hrs (Normal:32–167mcg/24hrs)
- **ECG** : Sinus rhythm
- **Chest X ray** : normal
- **ECHO** : No RWMA, No valvular pathology, no cardiac shunt lesion, normal PA pressure, LVEF 60%.
- **USG abdomen revealed** :There is well defined heteroechoic solid mass in left suprarenal location between the upper pole of left kidney and spleen, measuring 8 X 8 X 8cms- left adrenal tumour .
- A Computed tomography (CT) scan of the abdomen revealed Large well defined rounded 76 X 78

X 60 mm sized fat density lesion is noted arising from left adrenal gland. There is evidence of small focus of soft tissue density noted within suggestive of adrenal myelolipoma.

Management

- Patient was on Tab. Telmisartan 40mg continued on day of surgery and oral hypoglycemic agents changed over to inj.insulin according to sliding scale and morning dose on insulin skipped on day of surgery.
- Tab Alprazolam 0.5mg was given night before surgery.
- Combined general anaesthesia and epidural anaesthesia was planned.
- NIBP, Pulse oximetry, ECG were connected.
- At the start of procedure blood pressure was 130/70 mmHg, heart rate was 98/min.
- Epidural catheter was inserted at T12-L1space.
- Premedicated with Inj.ondansetron 4mg, Inj.midazolam 1mg.
- Patient was sedated with Inj.fentanyl 100 µg.
- Induced with Inj.propofol 100mg. Inj.xylocard 2.5ml iv 30 sec before intubation to attenuate the pressor response.
- Intubated after giving Inj.vecuronium 6mg using cuffed oral endotracheal tube size 8.5mm, fixed at 22'.
- Anaesthesia was maintained with isoflurane, oxygen and nitrous oxide and Inj.vecuronium.
- 4ml of Inj.bupivaine 0.25% and inj.buphrenorphine 150mcg was given through epidural route.
- Bradycardia occurred just after incision which was treated with Inj.atropine 0.4mg IV.
- During dissection of tumour BP increased to 225/187mm of Hg, which was controlled with Inj.Nitroglycerine 0.5mcg/kg/min infusion and BP maintained around 120/80mmHg.
- Patient was extubated after giving adequate reversal.
- Post operative period was uneventfull.

DISCUSSION

- Adrenal myelolipoma (AML) was first described by Arnold as “adrenal lipoma” in 1866. The term “myelolipoma” was coined by Oberling in 1929.
- The reported incidence of adrenal myelolipoma varies from 0.08% to 0.4 %
- They are mostly unilateral and do not undergo malignant transformation (Puneet *et al.*, 2006) Bilateral tumours occur in about 10% of cases (Civilli *et al.*, 2008) inactive, and can be managed conservatively.
- Accepted indications for surgical excision are symptomatic tumor, size greater than 4 cm, metabolically active tumor and suspicion of malignancy on imaging study (Zieker *et al.*, 2008).
- Adrenal myelolipomas are generally considered as non-secreting Adrenal incidentalomas.
- The detection of an adrenal lesion should prompt biochemical evaluation unless it is an obvious myelolipoma. Adrenal myelolipomas are of low CT attenuation and also contain fat (-10 to-20 Hounsfield units (HU)); therefore, the diagnosis is generally clear (Haque *et al.*, 2004).
- Adrenal myelolipomas has been reported in association with several diseases like cholelithiasis and malignancies of the kidney, bladder, stomach, lung.

Conclusion

The management of patients with Adrenal myelolipoma remains a challenge for the anaesthesiologist. Our role in the successful outcome of such surgeries begins from adequate pre-operative preparation, extensive intra operative monitoring and careful follow up during the post-operative period. Prognosis is usually good if the tumor is detected early to avoid major complications related to catecholamine excess, size of tumour.

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