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CASE REPORT

Adrenal Mass With Pregnancy

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Introduction

Early diagnosis of adrenal mass with pregnancy, conservatively managed, caesarean section at term followed by laparoscopic adrenalectomy after 3 months.

Case Report

A 23 year old primigravida reported with 15 weeks pregnancy last menstrual periods on 24th February, 2003 was subjected for routine ultrasonography, A left adrenal mass was detected. She complained of nausea, vomiting, sweating, episodic throbbing, bitemporal headache relieved after vomiting, photophobia, and phonophobia. Her blood pressure was 140/100 mmHg. Her thyroid and renal profile was normal. Ultrasonography (USG) revealed a well defined, smooth, ovoid hypoechoic solid mass measuring 3 × 2.7 × 2.3 cm over the left paraaortic region, suggestive of left adrenal mass. Right adrenal region was normal. There was a intrauterine 15 weeks live intrauterine pregnancy with no fetal malformation. Magnetic resonance imaging suggested diagnosis of an adrenal adenoma, less likely to be pheochromocytoma.

She was admitted on 30.6.2005 for safe confinement of pregnancy and was discharged after investigations and control of blood pressure on 18.7.2005. The investigations, prenatal and postnatal, are shown in Table 1.

These investigations suggested secondary aldosteronism. Fundoscopy was normal 2D echo was also normal with 60 %. left ventricular ejection fraction (LVEF). After joint discussion between obstetrician, urologist, endocrinologist and cardiologist, it was decided to manage her conservatively. Her hypertension was controlled by methyldopa (250 mg three times a day which was later increased to 500 mg four times a day) and labetalol (50 mg once a day, subsequently increased to twice a day.) The blood pressure was well controlled but for a few episodes of high blood pressure up to even 190/110 mm Hg, which were controlled with nifedipine (5 mg sublingual). A careful fetal surveillance was carried out by regular USG and doppler monitoring as and when required.

At 35 weeks, USG revealed intrauterine growth retardation with decreased diastolic flow in the uterine vessels and there were increased frequency of episodic attacks of hypertension for which she needed admition. She was readmitted on 19.10.2005.

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Table 1 Investigations prenatal and postnatal

	During pregnancy	Post delivery	Normal range
Urinary vanilyl mandelic acid	9.90 ng/24 h	15.30 ng/24 h	0–13.6 ng/24 h
Urinary metanephrines	0.48 ng/24 h	4.2/24 h	0–01.0 ng/24 h
Catecholamines		20,004 μg/24 h	0.20 μg/24 h
Serum cortisol levels	30.7 μg/dL		6.0–20 μg/dL
24 h free cortisol	120.6 μg/24 h		20–90 μg/24 h
Serum angiotensin	36.1 ng/mL/h		0.2–2.7 ng/mL/h
Aldosterone	784.9 pg/mL		50–194 pg/mL

Dexamethasone suppression test showed normal cortisol levels

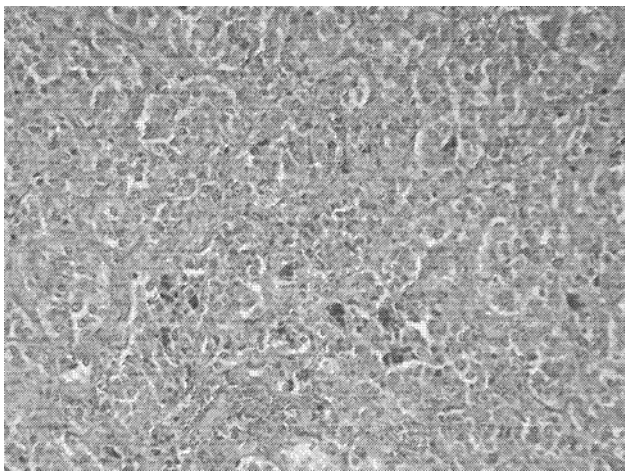

Fig. 1

An elective caesarean section was performed at 37 weeks under spinal anesthesia on 14.11.2005 and a live female baby of 2.3 kg was delivered. Surgery was uneventful after which she was shifted to ICU for close monitoring. On second postoperative day, her ECG showed sinus tachycardia and T wave inversions suggestive of ischaemia. 2D echo cardiography showed generalized hypokinesia with LVEF of 25 %. She was administered digoxin (0.25 mg daily for 5 days in a week) and furosemide (20 mg daily). Antihypertensives were continued. She recovered well and was discharged after 8 days on 11.11.2005.

Two months after delivery, she had similar episodes of headache, giddiness, nausea, vomiting and sweating for which she was readmitted for reevaluation and treatment. On 3.1.2006 and was further investigated for the nature of the adrenal mass and discharged on 5.1.2006.

She was put on a high salt intake (5–8 g/day) and plenty of fluids orally. She was started on phenoxybenzamine 10 mg twice daily and labetalol 50 mg daily. Once her hypertension was controlled, she was readmitted on 23.1.2006 and subjected to laparoscopy and adrenal gland along with the mass was removed on 25.1.2006. Preoperatively, intraoperatively and post operatively, she was maintained on steroids (50 mg/IV/6 hourly). Blood sugar and blood pressure was well within normal limits in the postoperative period. One unit of packed cell transfusion was given. She was discharged on 31.1.2006. The histopathology of the specimen revealed pheochromocytoma (Fig. 1). Patient was discharged after 5 days with maintence dose of prednisolone (5 mg/daily). Two months following operation, all supportive drugs, viz., steroids and antihypertensives were omitted. Post adrenalectomy, the patient and baby are both doing well. The mothers blood pressure is under control with disappearance of headache and sweating. She breastfed the baby for 10 months; 4 months exclusive breast feeding and later along with top feed. The baby is fully immunized and doing well.

Discussion

Adrenal tumors are very rare and much more uncommon with pregnancy. Adrenal mass with pregnancy is associated with high maternal and fetal morbidity and mortality.

Maternal and fetal mortality in cases of pregnancy with pheochromocytoma is as high as 55 % and 50 % respectively [1]. With early diagnosis of adrenal mass during pregnancy, maternal mortality and fetal mortality is reduced to 4 % and 11 % respectively [2]. Several authors have suggested that once adrenal mass is diagnosed before 24 weeks of pregnancy, the tumor should be removed at the earliest; in case diagnosed in the third trimester, the general condition should be stabilized with medical therapy, followed by delivery by cesarean section. Removal of the tumor can be done during cesarean section or laparoscopically after 3 months.

In our case the pregnancy was continued till term by controlling hypertension and her symptoms. Elective cesarean section was performed at term. Following full recovery, adrenalectomy was performed laparoscopically three months after cesarean section, giving a good maternal and fetal outcome.

The number of cases in the literature being small, there is no definite regime which could be followed for each and every case. Every case should be viewed separately and treatment individualized depending upon the response to medical therapy, period of gestation and the progress of pregnancy.

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