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CASE REPORT

ADRENAL TUMORS COMPLICATING PREGNANCY: TWO CASE REPORTS AND LITERATURE REVIEW

***Dr. Vishal Naik, Dr. Shivendra, Dr. Sreeniketh Reddy, Dr. Prudhvi Reddy Amulya Aggarwal and Dr. Kasi Vishwanath**

Rajarajeswari Medical College and Hospital, Bangalore, India

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ABSTRACT

Most adrenal tumors are identified incidentally and non-functional. However, hormone-secreting tumors can result morbidity and mortality. Hemodynamic lability and hypertension in pregnancy are associated with worse maternal and fetal outcomes.

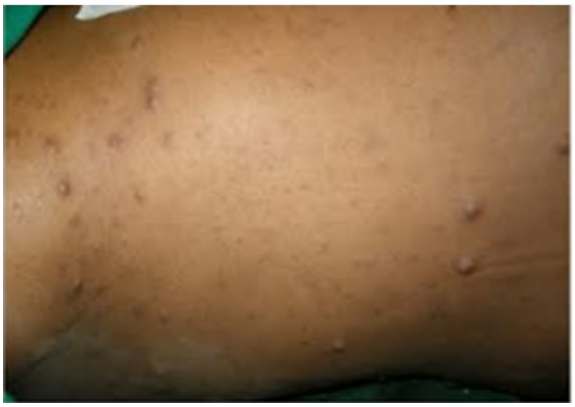
INTRODUCTION

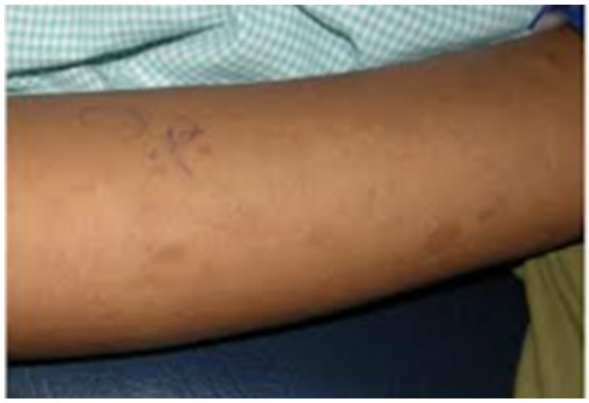
Most adrenal tumors are identified incidentally and non-functional. However, hormone-secreting tumors can result morbidity and mortality. Hemodynamic lability and hypertension in pregnancy are associated with worse maternal and fetal outcomes. Achieving a diagnosis of hormone excess due to adrenal tumors can be clinically more difficult in the gravid patient due to normal physiologic alterations in hormones and symptoms related to pregnancy.

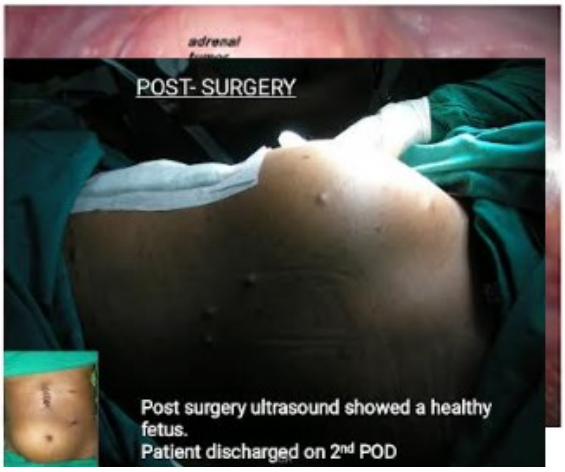
Case History: Our First case is a 26-year-old primigravida who presented with history of 22 weeks amenorrhea. Her 2nd trimester anomaly scan revealed a heterogenous mass of 6*4cms over the left kidney with a single live intrauterine fetus of AGA. She was referred to us in view of the same. She had occasional headaches with borderline high blood pressure measurements of 150/90 during her ANC visits. On examination she was normotensive on multiple occasions. But she had multiple neurofibromatosis and café-au-lait spots. Her cardiorespiratory system examination was normal. MRI was done which showed 6*8 cms left adrenal mas with mixed attenuation. 24hr- urinary catecholamines/VMA was normal. Plasma adrenaline and nor-epinephrine levels were high normal. Fundal examination was normal. Serum potassium was low.

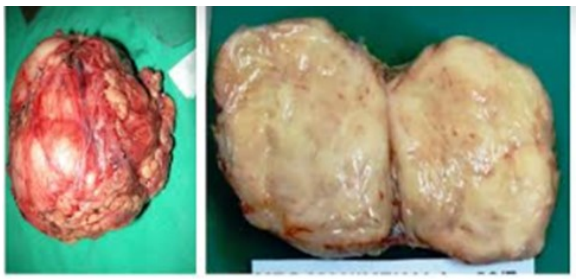
Corresponding author: *Dr. Vishal Naik,
Rajarajeswari Medical College and Hospital, Bangalore, India.

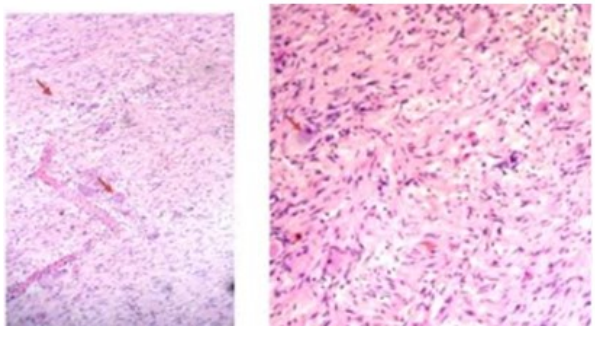
ECG and Echo was normal except for few ectopic. Concerns were that a diagnosis of phaeochromocytoma could not be conclusively ruled out which could result in high chance of mortality at childbirth. Patient was over 22 weeks gravid, hence terminating pregnancy had its own challenges and 25% of tumors larger than 6cm are malignant. Patient opted for surgery accepting the surgical risks. Patient underwent a successful lateral transabdominal laparoscopic left adrenalectomy with intraoperative continuous CTG monitoring. Post surgery patient had a healthy fetus on USG. She was discharged on POD-2. HPE showed a 7*8*7 cm smooth surface swelling with fleshy homogenous greyish yellow cut surface. HPE was suggestive of ganglioneuroma. She gave birth to a healthy male baby 17 weeks later. Second Case was another 26-year-old G2A1 with history of 5 months amenorrhea, Right adrenal tumor was identified incidentally on obstetric scan. No history of hypertension, paroxysmal symptoms, weight loss. USG done 2 months ago showed tumor to be 6.2*6.3 cms and interval scan after 1 month showed the lesion to be 9 *6.5 cms. On examination No cutaneous markers, BP-130/90, Striae+. ACTH and Urine 24hrs cortisol was normal. 24-hour urinary VMA was elevated (24/13). Echo and fundoscopy was normal. MR imaging showed lesion in right adrenal of 9*7.2*6 cms , hypointense on T1 and hyperintense on T2 with loss of fat planes between lesion and superior aspect of kidney. Patient underwent successful transabdominal laparoscopic right adrenalectomy with intraop- fetal monitoring. Post-op scan showed a SLIUF with AGA 23weeks 2 days. Iron, calcium and progesterone depot preparations were given post op. Mother delivered a healthy baby at term.

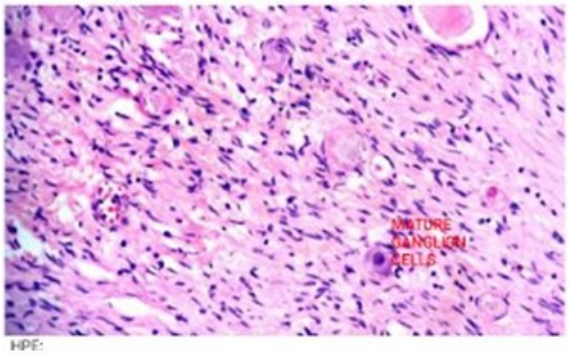












HPE- Globular mass of 10*8*6cms with tan yellow homogenous and soft cut surface. Microscopy showed mature ganglionic cells with large central nuclei and abundant eosinophilic cytoplasm intermixed with schwannan rich stroma. Periphery showed adrenal cortical cells. Impression- Ganglioneuroma- mature type.

DISCUSSION

Ganglioneuromas are rare tumors of peripheral nervous system (sympathetic nerve fibers) arising from neural crest cells in adrenal medulla. They are usually benign but some may progress to neuroblastoma. Commonly present in 10-40 yrs age group. Tumors are slow growing but may release certain hormones like catecholamines, VIP or androgenic hormones. Local recurrence is low, if completely excised. Surgery can be safely done in pregnancy with good outcomes, if certain precautions are adhered to. Veress needle vs open hasson entry have no difference in complication however care should be taken to modify port position according to uterine fundal height. CO2 insufflation can be safely used upto 15mm Hg to facilitate adequate visualization. Intraop capnography should be monitored. It is advisable to periodically release the pneumoperitoneum to allow physiological recovery if higher pressures are being used e.g in obese. Intraoperative sequential pneumatic compression devices and postop early ambulation are mandatory to prevent DVT. FHR monitoring should be done furing surgery, or atleastpre and post-op. Tocolytics shouldn't be used prophylactically in all patients. Perioperative obstretic consultation is necessary. Risk of fetal loss is 5.8%, compared to3.1% in open surgery. Risk off is 2.1% compared to 8.1% in open surgery.

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