ISSN: 0975-8585

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Rare Complication Following Resection of Extra-Adrenal Pheochromocytoma.

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ABSTRACT

Pheochromocytoma is pharmacologically volatile, potentially lethal catecholamine containing tumour of chromaffin tissues [1]. These tumours are rare and especially extra adrenal pheochromocytoma is very rare. In this case report, we present a case of multiple extra adrenal pheochromocytoma which was operated for, and had a rare post-operative complication.

Keywords: Extra Adrenal Pheochromocytoma, Vanillyl Mandelic Acid, Phenoxybenzamine, Persistent Hypertension.

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ISSN: 0975-8585

INTRODUCTION

Pheochromocytoma surgery present great challenges to the anaesthetist, due to frequent, sudden and severe hemodynamic instability both intra and post operatively. It is associated with various complications such as severe hemodynamic changes while handling the tumour, severe hypotension on its resection, massive blood loss. Here we present a case of multiple retro peritoneal, extra adrenal pheochromocytoma which is very rare and had an interesting post-operative complication.

CASE REPORT

A 20 year old male patient presented with abdominal pain, vomiting, sweating, head ache and lethargy. He was a heroin addict. On examination his BP was 180/110 mmHg. History was suggestive of pheochromocytoma. 24 hours urine Vanillyl Mandelic Acid (VMA) concentration was 80 mc mol per day (normal 5 – 25 mc mol per day). Contrast CT abdomen showed multiple retro peritoneal tumours. Diagnosis of extra-adrenal pheochromocytoma was made. Patient was on oral phenoxybenzamine 40mg twice daily for the past three months, with which his BP was controlled to the range of 120/70 to 140/80. He was scheduled for Laparotomy and tumour resection under General Anaesthesia. Patient was referred to anaesthesia department for pre-operative assessment, which showed postural hypotension. ECG showed normal sinus rhythm. His routine blood investigations were within normal limits. His haemoglobin was 9gms% and Haematocrit was 27%. His airway was MPC class 2 with Thyromental distance of 5 cms. He was assessed under ASA – III. He was advised preoperative hydration at the rate of 1500ml/day for 48 hours prior to surgery and a premedication of lorazepam 2mg orally on the night before surgery and phenoxybenzamine was continued at the same dosage.

On the day of surgery, he was shifted to the operation room and connected to 5 lead ECG monitor, pulseoxymeter and NIBP. Intravenous and intra-arterial cannulation was done. He was premedicated with Inj. Midazolam 3mg, and Inj. Fentanyl 150 mcg, and Inj. Labetalol 2.5mg intravenously. He was induced with Inj. Propofol 140mg intravenously and intubated under Inj. Vecuronium 8mg intravenously with an 8mm cuffed endotracheal tube. Right IJV was cannulated, anaesthesia was maintained with O2:N2O 1:2, Sevoflurane and Vecuronium infusion at 0.02mg/kg/hr and Inj. Morphine 6mg intravenously.

Sodium Nitroprusside (SNP), Nitroglycerine, Noradrenaline, and Adrenaline infusions were kept ready. SNP infusion was started at a rate of 0.5-0.75 mcg/kg/min during the handling of the tumour. CVP was maintained around 12 - 14 cms of water, with both crystalloids and colloids. During handling of the tumour, the rise in BP was handled with the SNP infusion. The usual anticipated hypotension after resection of the tumour was not seen in our case and the BP persisted to be high in the range of 140 – 150/ 90-95 mm of Hg. After completion of procedure, neuromuscular blockade was reversed with glycopyrrolate and neostigmine, and patient was extubated after return of adequate muscle power and normal airway reflexes. Patient was transferred to the Intensive Care Unit, fully awake, but with persistent high blood pressure. On the first Post-Operative Day (POD) – NTG infusion started. On the second POD – SNP infusion, Labetalol was started. BP was under control after 5 days.

DISCUSSION

Preoperative assessments of patients with pheochromocytoma are an essential part in intra operative management [3, 4]. Roizen et al recommended the following pre-operative conditions prior to surgery for pheochromocytoma: BP less than 160/90 for 24 hours prior to surgery. Postural hypotension more than 80-45 mm Hg. ECG should be free of any ST – T changes for a week and no PVCs more than 1 in 5 minutes. [7,8] The usual anticipated complications in pheochromocytoma surgeries are hypertension during handling of tumour, [2, 4, 5] severe hypotension following tumour resection. [9-11] But in our case, there was persistent hypertension even after tumour resection. This could be because of residual tumour masses. This hypertension was controlled with SNP infusion and the hypertension settled after 5 days probably due to autonecrosis of the residual tumour masses.

ISSN: 0975-8585

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