Discussion

Pheochromocytoma is a tumoral disease that originates from chromaffin cells in the sympatho-adrenal system. These tumours secrete epinephrine and norepinephrine. However, they may also produce atrial natriuretic peptide, vasoactive intestinal peptide, endothelin, erythropoietin, dopamine, neuropeptide Y, and adrenomedullin(1). Pheochromocytoma is a rare disease; it is present in only 0.1% of hypertensive patients(2). Although there is no difference in age or gender, occurrence increases in the 4th and 5th decades. Pheochromocytoma is often called as a '10% tumour' because 10 percent of them are bilateral, malignant, extra adrenal, multiple, familial and occur in children(3). Our patient had a right sided, non-malignant and single adrenal tumour. The most common clinical sign of pheochromocytoma is a sustained or paroxysmal hypertension, and the most common symptoms are headache, excessive truncal sweating, and palpitation. Angina pectoris, abdominal pain, queasiness, anxiety, and paleness are other symptoms of it as well. Patients with tumours that predominantly secrete epinephrine can present with hypotension or even shock, caused by hypovolemia, desensitization of adrenergic receptors or abrupt cessation of catecholamine secretion owing to tumour necrosis. This might be the possibility in our patient who had persistent hypotension before surgery (4).

Acute coronary syndrome in the absence of atherothrombotic coronary artery disease has limited differential diagnosis. Takotsubo cardiomyopathy is one of the main causes for this kind of presentation. Relationship between catecholamine-induced shock and pheochromocytoma has been recognized for more than 40 years, but the link between takotsubo cardiomyopathy and a pheochromocytoma related crisis leading to acute cardiac failure or shock was not recognised until recently. It can be triggered by any stresses. Though benign, surgery is advocated for giant pheochromocytomas. As laparoscopy offers a better anatomical exposure, shorter length of stay, a decrease in postoperative pain, faster return to preoperative activity level, improved cosmetic, and reduced blood loss, early to resumption of oral feeding (5), we offered her a minimally invasive surgery option and which resulted in a favourable outcome. Early vascular control, minimal handling of the tumour and a multidisciplinary approach to combat potential intra-operative crisis are the cornerstones in managing such cases. Malignant counterparts need to be excluded histologically and our patient didn't have malignant component (6). The possibility of relapses of the tumour makes lifelong follow-up obligatory (7).

The authors would like to emphasize two key messages for the clinicians from this rare clinical presentation. The clinical picture of acute coronary syndrome and LV dysfunction with normal coronary epicardial vessels should raise the suspicion of stress induced cardiomyopathy and episodes of headache associated with palpitations and fluctuating blood pressure should warn us the possibility of pheochromocytoma being the cause for the cardiomyopathy.

Although abnormal biochemistry is considered the cornerstone of diagnosis for endocrine tumours however as illustrated by this case report a high degree of clinical vigilance should prompt the clinician to recommend surgical excision of the tumor for histological confirmation of diagnosis and for the cure of this potentially fatal condition.

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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