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TAKAYASU ARTERITIS IN PREGNANCY: A RARE CASE PRESENTATION

Obstetrics & Gynaecology

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ABSTRACT

Takayasu arteritis is a chronic inflammatory arteritis affecting large vessels. Unlike temporal arteritis, which develops in the 5th decade, the usual time of presentation of takayasu arteritis is in the 2nd – 3rd decade. It usually afflicts women of reproductive age group and leads to occlusion of systemic and pulmonary arteries especially the aorta and its main branches. It is associated with abnormal angiography of the upper aorta and its branches and with upper extremity vascular impairment. As pregnancy in itself is a state of strong inflammatory response, associated takayasu arteritis requires careful watch in the antepartum, intrapartum and postpartum period. A multidisciplinary approach involving obstetricians, cardiologists, anaesthesiologists, rheumatologists and neonatologists is required for an optimal maternal and foetal outcome. I report a case of 24 year G2P1L1 female who presented with chronic hypertension in 1st trimester and on further investigations was diagnosed with takayasu arteritis. Pregnancy was managed with regular follow up of the patient and live male child was extracted out with birth weight-3.2Kg by elective LSCS at term. The aim to report this case is to create awareness among clinicians regarding the myriad presenting features, early diagnosis and appropriate management.

KEYWORDS

takayasu arteritis, pregnancy, multidisciplinary, hypertension.

INTRODUCTION

Takayasu arteritis (TA), also known as pulseless disease/ aortoarteritis/ young female arteritis, is an idiopathic chronic inflammatory progressive large vessel vasculitis afflicting women of childbearing age. It is a rare disease with incidence as low as 13 cases per million population(1).It leads to narrowing, occlusion, and aneurysms of systemic and pulmonary arteries in the body, affecting primarily the aorta and its branches(2). Pregnancy per se has no effect on the disease but the effects of disease on pregnancy like hypertension, intrauterine growth restriction, abruption, multiorgan dysfunction require regular antenatal check up for early diagnosis and management of the complications(3). Patients often remain undiagnosed and conceive without having prior knowledge of having TA and present for the first time in pregnancy with symptoms of headache, hypertension (4). Hence timely diagnosis of the disease is keen in the management of disease as well as pregnancy

CASE REPORT

A 22 year PGR was admitted in a tertiary care hospital at 37 weeks as a case of gestational hypertension with rheumatic heart disease (moderate Aortic Regurgitation(AR)). Her Blood Pressure (BP) was 154/92mm of Hg and pulse rate 84/Minute. She was started on tablet labetalol 100 mg BD. She went into spontaneous labor at 38 weeks 5 days and delivered a healthy male child with birth weight 2.5 Kg. She was discharged in stable condition on 5th postnatal day.

She again conceived spontaneously 2 years after the first child birth and came for first antenatal visit at 8 weeks of gestation. She had history of headache and intermittent claudication of upper limbs for the past 1 year. On examination her blood pressure in right upper limb was 160/90mm of Hg and pulse rate was 92/min whereas in left upper limb her BP was 120/80mm of Hg and pulse rate was 90/min. There was no albuminuria. B/L carotid bruit was present along with ejection systolic murmur in aortic area. The patient was admitted with a preliminary diagnosis of RHD (mod AR) with chronic hypertension. She was started on tablet methyldopa 250 mg TDS and was already on injection benzathine penicillin 1.2 MIU/ 3 weekly. All routine antenatal and specific blood investigations (CHG, LFT, RFT, PT, INR, aPTT) were normal. Renal Doppler was done to rule out renal artery stenosis as a potential cause of chronic hypertension but was found out to be normal. Cardiology consultation was done and echocardiography revealed moderate AR with left ventricular ejection fraction of 65% with diffuse homogenous wall thickening of carotid artery with mild concentric left ventricular hypertrophy (LVH) with normal right/left ventricular systolic function with probable diagnosis of TA. Due to concern regarding radiation exposure contrast enhanced CT angiography was deferred and patient was asked to follow up after delivery. She was put on strict fetomaternal surveillance. Antenatal period was uneventful. An elective lower segment caesarean section (LSCS) was performed at 38 weeks with extraction of male child with birth weight of 3.2Kg. In the postnatal period she was started on telmisartan 40mg OD and metoprolol XR 50 mg OD. Patient and her baby were discharged on 5th postoperative day with stable vitals and in good health. Six weeks postpartum her CT angiography was performed which revealed 50% stenosis of descending aorta, 50% stenosis of left subclavian artery and 50% stenosis of right radial artery. The diagnosis of TA was then confirmed. Patient is now under regular follow up in the department of cardiology.

DISCUSSION

Women account for 80%-90% of TA cases (5). The disease has a worldwide distribution, with the greatest prevalence being in Asia (6). Its etiology remains primarily idiopathic. Autoimmunity, sex hormones, and genetic (predisposition of the human leukocyte antigen, HLA BW52) factors have often been hypothesized as plausible factors causing it (7). TA has been classified as type I (disease involving aortic arch and its branches), type IIa (ascending aorta, aortic arch and its branches), type IIb (ascending aorta, aortic arch and its branches, thoracic descending aorta), type III (lesions constrained to descending thoracic aorta, abdominal aorta and/or renal arteries), type IV (involvement of abdominal aorta and/or renal arteries), and type V (combined features of types IIb and IV) (8). The above described patient was labelled as type II TA. In pregnancy hypertension is fairly common due to reduction in elasticity and narrowing of the arteries, besides abnormalities in functioning of aortic and carotid baroreceptors function (9). In all cases of hypertension BP should be measured in both upper and lower limbs as well as on both right and left side. Any discrepancy as was present in our case should be noted as it is one of the clinical signs of TA. Pulselessness of unilateral or bilateral radial arteries and vascular bruit should be seen in all cases of hypertension. Bilateral carotid bruit was present in this case. The diagnosis is usually made on history and clinical findings. The usual symptoms of active TA are myalgia, intermittent claudication, low grade fever, headache and visual defects. On clinical examination there may be non palpable peripheral pulses, BP discrepancies in both limbs or presence of arterial bruit. However, computed tomography or magnetic resonance angiography can detect TA even before the development of severe vascular compromise (9). Preconceptional counselling is must in a diagnosed case of TA along with dosage adjustment of various drugs. Pregnancy should be planned in remission state to avoid complications. In pregnancy multidisciplinary approach with early booking and regular antenatal visits is must. Serial BP monitoring, cardiac and renal status is vital in such patients. Foetal surveillance includes Cardiff count, foetal biometry, biophysical profile and foetal Doppler (10). Vaginal delivery with epidural analgesia is the preferred mode of delivery. Early diagnosis with appropriate management is imperative for a good maternal and foetal prognosis.

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