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Case Report

Takayasu arteritis in pregnancy: a case report, and clinical lessons learnt

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ABSTRACT

A case report of known case of Takayasu arteritis (known to the woman in case report) in a primigravida, but unrevealed to the obstetrician till advanced stage of pregnancy is reported. The authors share the lessons learnt by them from this case which would improve diagnosis, evaluation and management of pregnancy hypertension. A brief account on clinical manifestations and diagnosis of Takayasu arteritis is also included.

Keywords: Pregnancy, Hypertension, Takayasu arteritis, Preeclampsia, Maternal hypertension

INTRODUCTION

It is common practice to label maternal hypertension detected in early months of pregnancy as idiopathic and subsequently observe these women for development of superimposed preeclampsia. However, diseases causing secondary hypertension in young women are not uncommon and one such disease relates to the aorta, the Takayasu arteritis, which is a chronic, progressive, autoimmune, idiopathic, large-vessel vasculitis that usually affects young adult.[1]

CASE REPORT

A 30 years lady married for 2 years was diagnosed with early pregnancy and hypertension of very high range (240/110 mm of Hg) at a multispecialty hospital from a metropolitan city (her in-law's place). The physician started her on anti-hypertensive and advised an ophthalmic check-up. She continued her antenatal check-up till 16 weeks of pregnancy and then shifted herself to her maternal place (a town). Here she revealed to her obstetrician that she is a known case of Takayasu arteritis diagnosed at her 19 years age. Till this time family members and doctors at in-law's place were not aware of her this cardio-vascular problem. She was taking her dose of prednisolone as prescribed from 2012 the year of diagnosis of her Takayasu arteritis, however her computed tomography (CT) aortogram was not available.

Her blood pressure in right upper arm was 180/110 mm of Hg. Now being a diagnosed a known case of Takayasu arteritis her blood pressure was recorded in other 3 limbs-it was 130/90 in left upper arm, 120/60 in lower limbs. Other than continuing routine antenatal care, anti-hypertensive, she continued her prescribed prednisolone.

Her 2-D echo showed concentric left ventricular hypertrophy, good ventricular function, EF 62%, trivial tricuspid regurgitation, no mitral regurgitation, no aortic regurgitation and no clots. Her carotid Doppler suggested right carotid artery 80- 90% stenosis and left carotid artery had 90% stenosis.

Her fetal growth was normal throughout the pregnancy and baby achieved a weight of 2986±298.6 gms at 37 weeks 4

days with birth weight of 2740 gms. The umbilical artery and MCA Doppler were also normal.

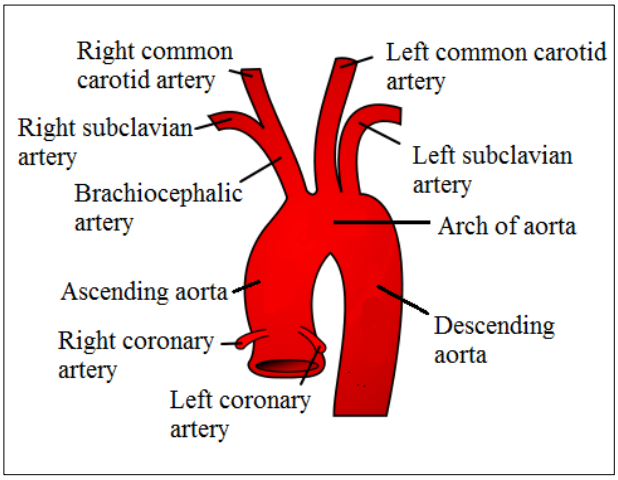

Figure 1: Aorta, its branches from the arch.

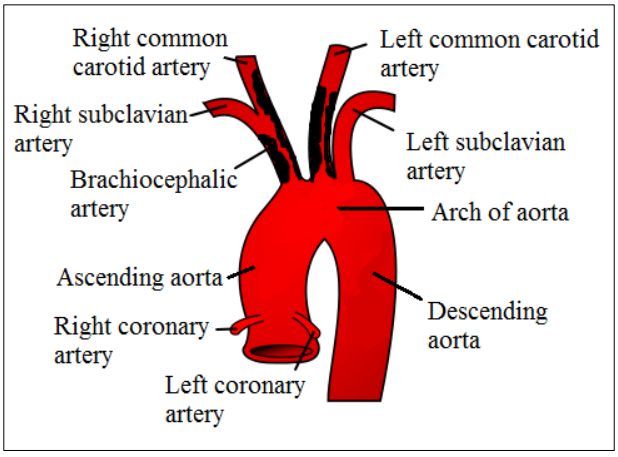

Figure 2: Type I Takayasu arteritis indicating stenosis of aortic arch branches. No affection of descending aorta and coronaries.

Her CBC (Hb 12.1gm%, platelets 1.58 L, WBC 6.76 K), urine (sugar and proteins were absent), liver function tests were normal, serum creatinine was 1.61 mg/dl, spot urine creatinine was 42.9 mg/dl; however, she had significant microalbuminuria (17.4 mg/dl, normal lab range 0.00-0.20) and raised CRP (67.0 mg/l, normal lab range 00- 06).

The case was considered for caesarean section under epidural analgesia, for having severe hypertension (right arm 220/ 120 mmHg, left arm 170/ 80 mmHg) which might cause maternal cerebral complications. Labetalol, and nitroglycerine were used to control the blood pressure. Mother developed atonic postpartum haemorrhage (PPH) which resulted into Hb drop to 7.2 gm%, which recovered to 9.5 gm% after blood product replacement. She was managed at critical care unit. She continued to have severe range of hypertension which was managed by nitroglycerine infusion, calcium channel blockers and labetalol.

She delivered a male baby weighing 2.740 kg which was observed in NICU for two days because of unstable maternal condition (relatives being busy with critical care of mother).

DISCUSSION

Takayasu arteritis is a chronic progressive disease of unknown etiology causing stenotic lesions along aorta. It affects mostly young adults, mostly women (men are also affected) before 40 years of age, this makes it a condition confronted during pregnancy. It has five stages depending upon its progression along the length of aorta in causing its stenosis.[2] In stage V entire length of the aorta and its branches are affected. For diagnosis angiography has been now replaced by computed tomography and magnetic resonance techniques as they are less invasive than standard angiography and allow diagnosis of Takayasu arteritis earlier in the disease course. Corticosteroids to limit the arteritis (of autoimmune nature) is the chief treatment, cytotoxic drugs and monoclonal antibodies (biologic agents) are also tried.

Fetal outcome could be predicted on the basis of maternal vessel involvement (abdominal aorta and renal), severity of maternal hypertension, superimposed pre-eclampsia, and timing of adequate blood pressure control.

The four most important complications are Takayasu retinopathy, secondary hypertension, aortic regurgitation, and aneurysm formation.[3,4]

This case of Takayasu arteritis during pregnancy highlights diagnostic issues along with social problems related to matrimonial matters.

1. For reasons of social stigma the mother did not reveal her cardiovascular disorder to the in-laws and to the doctors initially.

2. With such a high range blood pressure in one arm, it should be a standard protocol to feel peripheral pulses in all four extremities and also record blood pressure; and to search for bruit along the big vessels (carotids, abdominal aorta).

3. Clinically, this case appears to be of type I Takayasu arteritis (Figure 1- aortic arch and its branches, Figure 2- Takayasu of type 1- affection of only aortic arch branches) as initial records of blood pressure show hypertension in right arm and normal BP in other three extremities. Absence of hypertension in other extremities and normal fetal development also suggests absence of involvement of abdominal aorta and sparing of renal and iliac arteries.

CONCLUSION

This brief case report and review of literature on Takayasu arteritis during pregnancy gives a lesson that in cases of hypertension during pregnancy peripheral pulses and

blood pressure in all four extremities should be recorded at first check-up.

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