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TAKAYASU ARTERITIS IN PREGNANCY - CASE REPORTS

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KEYWORDS :

INTRODUCTION –

Takayasu arteritis known as pulseless disease is a chronic vasculitis that involves mainly large vessels like aorta and its branches, coronary and pulmonary arteries . It was first described by Japanese ophthalmologist Mikito Takayasu in 1908 . The classical definition of TA is chronic, progressive inflammatory, occlusive disease of the large vessels. The arterial lesion can lead to secondary hypertension, retinopathy, cardiac involvement, cerebrovascular events and premature death . Frequently observed in Asian countries is the most common cause of renovascular hypertension in India, China, Korea, Japan and 4 other countries of south east Asia. It is also known as young female disease as it is more commonly seen in young women than men. Antenatal women with TA suffer from extremely high risk of poor maternal and fetal outcomes. Wing's scoring can be useful to predict neonatal outcome. Management of pregnant women with TA is challenging because of the chance of increase in cardiovascular complications. The course of the disease per se is not affected by pregnancy.

Increase in blood volume during pregnancy makes matter worse leading to cardiac strain, aortic regurgitation and CCF. Worsening of pre-existing hypertension, superimposed preeclampsia and fetal growth restriction could also result due to vasoconstriction.

There is no recognized guidelines for management of pregnancies with TA. Here we present two cases of TA who presented to us with a gap of 6 months at different gestational periods

Case report 1

In 2018, on 4th December 2018, patient had suddenly developed headache, diplopia, blurring of vision, abdominal pain, palpitation, easy fatiguability, claudication of both lower limbs, decreased urine output and low grade fever. On examination, her BP in right upper limb was 190/110mmhg and left upper limb was 180/100mmhg. The patient had prominent supraclavicular pulsations and left renal artery bruit. On investigating her, ESR was 96mm/hr, TLC was 7800, CRP was negative, serum urea 75mg/L, chest Xray was normal, ECHO showed concentric LVH with pericardial effusion. Carotid, lower limb doppler was normal, renal artery doppler revealed B/L renal artery stenosis. DTPA renal scan with ACE inhibitors was positive for hemodynamically significant renovascular hypertension(left>right). CT aortogram showed : 1) Circumferential luminal narrowing along with mild thickening of wall in abdominal aorta(4-5cm) from lower border of D12 to lower border of L2. 2)Severe narrowing of left renal artery at origin with post stenotic dilatation of middle part of the renal artery. 3) Mild narrowing of IMA at its origin. 4) Mild diffuse narrowing of left proximal SCA. 5) Both common carotid artery and right SCA were normal. Patient was then started on antihypertensives, steroids and methotrexate (T. Amlodipine 2.5mg 4-0-4, T. Methyldopa 500mg TDS, T. Prazosin 2.5mg BD, T. Lasix 40mg OD, T. Methotrexate 15mg Weekly, T. Folic Acidweekly, T. Atorvas 10mg HS, T. Metoprolol 25mg BD). On 22/12/18- Repeat BUN was 9mg/dl, Hb- 10.8g%, LFT was normal. Patient continued the same treatment for 2 months. She received her first dose of INJ. TOCILIZUMAB in Feb 2019. She was advised to take a second dose after an interval of 1 month but patient did not follow-up.

Almost after 9 month, CT aortogram was repeated- mild to moderate diffuse luminal narrowing of Left SCA. In addition to narrowing and wall thickening of abdominal aorta(D12- L2), there was thickening and mild narrowing of lower most part of descending thoracic aorta at the level of oesophageal hiatus. Coeliac artery narrower just distal to its origin, near total occlusion of left renal artery at its origin, mild to moderate narrowing of right renal artery. Patient underwent PTRA with left renal artery stenting on 25/09/19. On 5/9/19, patient developed swelling of face, shivering, palpitation and increased appetite her BP was high. Slight change in antihypertensives was made T. Wysolone 5mg 2-0-1 was added. In April 2021 patient was incidentally diagnosed with 11 weeks of pregnancy patient was started on T. Propylthiouracil 50mg TDS as she was found to be hyperthyroid. Her anemia (HB-6.1g%) was corrected with blood transfusion. She continued T. Labetalol 100mg BD, T. Wysolone 5mg ½ BD along with regular T. Iron, T. Calcium, T. Folic Acid supplements. 1st and 2nd trimesters were uneventful. 3rd trimester ECHO revealed mild TR and also pulmonary artery renal hypertension.

Periodic review of maternal and fetal condition was done inconsultation with Cardiologists, Nephrologists, Rheumatologist. Lady had to be taken up for ELECTIVE LSCS at term in view of breech presentation. An alive, term boy baby, 2.460kgs was extracted by breech. Postpartum period was uneventful. Patient discharged on antihypertensives and T.Wysolone. Patient is stable at present.

Case report 2

A 32 year old Primi, diagnosed as a case of Takayasu Arteritis type-5 five years back. In 2017 CT Aortogram revealed concentric wall thickening of aorta, aortic arch, descending aorta, right brachiocephalic artery, left common carotid artery and left subclavian artery. Coronary and peripheral angiography revealed Takayasu arteritis Type 5, LSCA stenosis, abdominal aorta stenosis. Venous doppler of right lower limb revealed no evidence of deep vein thrombosis. She was on T.Defcort (started with 36mg OD tapered to 5mg OD) stopped before pregnancy, T.MMF (Mycophenolate Mofetil) 1g 12 hourly tapered to 500mg 12 hourly, T.Clinidipine 10mg OD, all these were continued till pregnancy. She had her first antenatal visit in our institution at 37 weeks+5 days. She was admitted for decreased fetal movements. She was a case of chronic hypertension with superimposed pre-eclampsia and also a case of GDM on meal plan. She was booked and immunized elsewhere till 37 weeks where she was started on micronized progesterone and Ecospirin 75mg once daily. For hypertension, she was on T.Labetalol 100 mg TDS. In third trimester, she was diagnosed as GDM and started on Oral hypoglycemic agents. She was also transfused with 1 unit PRBC for anaemia correction. On admission, her BP in right arm was 220/70 mm hg and left arm was 130/90 mmHg. Pulse on both arms and other peripheral pulsations were normal. Her neurological examination was normal. Uterus was term, fetus in cephalic presentation and Fetal heart rate was good. PIH profile was normal.

CRP was reactive (8.93). Maternal ECHO showed normal LVF, EF-63%, trivial TR,MR with normal PAP, mild AR with PR. Fetal surveillance done was normal. In view of decreased fetal movements and probable requirement of termination of pregnancy, steroid prophylaxis was given. To address the high BP, T. Labetalol was stepped up to 200 mg QID, T.Nicardia Retard 20 mg BD under cardiologist's advice. In view of fetal distress, patient taken up for emergency LSCS at 38 weeks. Postoperative period uneventful. She was discharged on T.Labetaolo 200mg TDS and T.Nicardia Retard 20mg BD.

DISCUSSION –

TA is a rare chronic inflammatory disease affecting the large vessels. Aetiology of which is probably autoimmune. This condition is predominantly seen in young women and hence it is not uncommon to come across pregnant women with TA. Age at diagnosis is less than 30 years in 90% of the cases .

The outcomes (maternal and prenatal) are affected by the type of arterial involvement. Poor perinatal outcomes are associated in patients with complicated disease and relapses.

Hypertension, preeclampsia, fetal growth restriction is found to be higher when abdominal aorta and renal artery are involved.

Poor obstetric outcomes with increased maternal and fetal complications are usually seen in pregnant women with TA .Unfortunately due to lack of awareness ,premenstrual diagnosis is delayed and many pregnant women with TA are diagnosed during pregnancy sometimes even in labour . Fortunately both our antenatal mothers were diagnosed with TA well before pregnancy and were on required medications and undergone necessary procedure (Case report 1).

Delay in diagnosis, early onset of hypertension and degree of vascular involvement (type 3,4 and 5 TA) are considered predictors of poor outcomes in pregnant women with TA.

Our case TA was diagnosed and evaluated before before pregnancy which was of great benefit and though it was angiographic type 4 disease with hyperthyroid. Good outcome was achieved because of close antenatal surveillance and multidisciplinary care.

CONCLUSION

It is advised to plan pregnancy during disease remission. Prompt early diagnosis of complications and it's management result in good maternal and fetal outcomes.

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