TAKAYASU'S ARTERITIS IN PREGNANCY: A THERAPEUTIC CONUNDRUM DURING COVID 19 PANDEMIC

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Background

- Takayasu's arteritis is a rare systemic vasculitis affecting the aorta and its primary branches[1].
- The annual incidence is 0.4 to 2 per million per year[2] with women being affected in 80-90 % of cases. It has a worldwide distribution with greatest incidence in Asia.
- We report a case of Takayasu arteritis in pregnancy diagnosed in the postpartum period, and discuss the challenges faced for optimal outcomes during the COVID-19 pandemic.

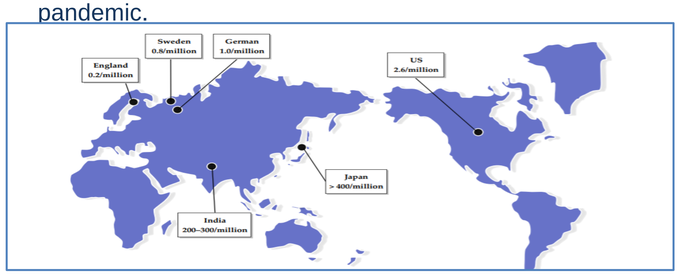

Figure 1: Incidence of Takayasu's arteritis around the world[3].

Diagnosis

- Computed tomography angiography of bilateral renal vessels revealed concentric circumferential wall thickening of distal descending thoracic aorta (Figure 3A) and bilateral proximal renal artery stenosis (Figure 3B).
- The descending thoracic aorta was stenosed over a length of 13 cm with significant luminal narrowing (Figure 4), and presence of post-stenotic dilatation in the aorta and the right renal artery.
- Her final diagnosis was Takayasu arteritis angiographic type III, with inactive disease by Kerr's score.
- She was planned for a stenting procedure in the postpartum period. However, due to the lockdown and closure of routine services in view of COVID-19 pandemic, the proposed procedure has been deferred.
- Currently the patient is on antihypertensives, lactating and at follow-up by teleconsultation, both mother and baby were doing well.

Figure 3: Contrast enhanced computed tomography (CECT) arterial phase image showing **A**: Significant luminal narrowing of distal descending thoracic aorta (red arrow) with post stenotic dilatation (white arrow) **B**: 3D Volume rendered image showing grossly stenosed right renal artery (red arrow) with post stenotic dilatation. The proximal left renal artery is not visualised (white arrow) due to severe narrowing. The inferior mesenteric artery is hypertrophied (green arrow) and anastomosing with branches of SMA.

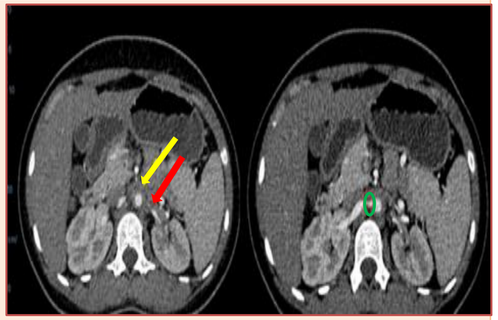

Figure 4; (Left): Contrast enhanced computed tomography (CECT) arterial phase image (axial section) showing narrowing of maternal abdominal aortic lumen with hypodense wall thickening (yellow arrow) and severe narrowing of the left renal artery (red arrow), **(Right):** The CECT arterial phase image of maternal abdomen (axial section) showing severe focal stenosis of the proximal right renal artery (green circle).

Case

- A G3P1L0 female presented at 30 weeks gestational age with preeclampsia and anhydramnios with history of IUFD complicated by preeclampsia in the previous pregnancy.
- Obstetric ultrasonography revealed absent end diastolic flow in umbilical artery suggestive of stage II FGR with anhydramnios(Figure 2).

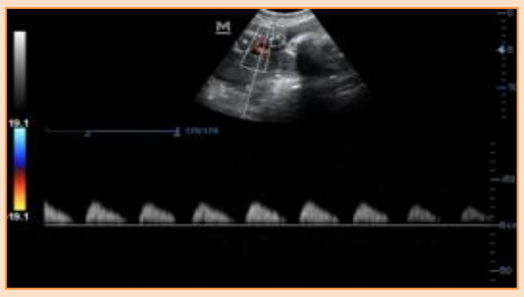

Figure 2: Absent end diastolic flow in fetal umbilical artery on color Doppler ultrasound

- She underwent an emergency caesarean section for uncontrolled hypertension delivering a preterm male baby weighing 1300grams with a good APGAR score.
- In view of differential blood pressure intraoperatively a diagnosis of Takayasu's Arteritis was thought of and patient was followed up.

Discussion

- Takayasu arteritis, a rare systemic large vessel vasculitis, is associated with high morbidity and mortality.
- Angiographically the disease is of 5 types as described below:

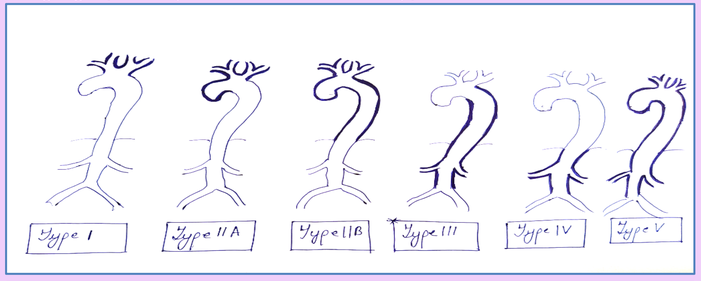

Figure 5: Classification of Takayasu's arteritis

- Treating obstetricians may not be readily familiar with the diagnostic criteria, clinical activity scoring and management in pregnancy.
- Increasingly, imaging is thought to be the major determinant of disease activity in Takayasu's arteritis[4]. Further, the ongoing pandemic, with its disruptions of routine care, complicated matters and the patient presented to us late.

Conclusion

To conclude, this is a case of 21 year old multipara with Takayasu's Arteritis Type III diagnosed in the postpartum period. While the obstetric outcome was good, an early diagnosis helps in tailoring optimal management. The ongoing COVID-19 pandemic complicates matters as multidisciplinary approach, referrals and treatment get disrupted.

References

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