

## REPAIRED RUPTURED ANEURYSM OF RIGHT SINUS OF VALSALVA AND PREGNANCY-A CASE REPORT

**Dr. Preeti Mohata\***

Junior Resident Obstetrics And Gynaecology , GMCH Nagpur. \*Corresponding Author

**Dr. Anil Humne**

Associate Professor, Obstetrics And Gynaecology, GMCH Nagpur

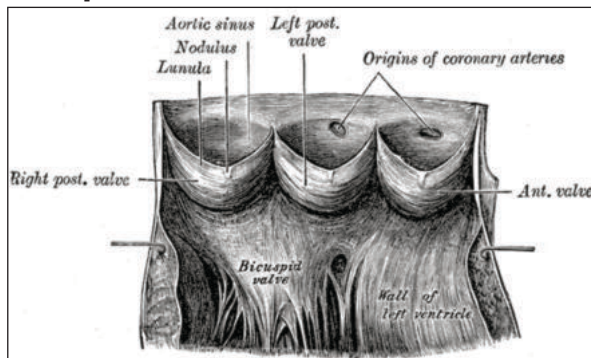
### ABSTRACT

A ruptured sinus of Valsalva aneurysm is a rare cardiac anomaly, usually of a congenital nature. There are few documented cases of this condition during pregnancy, which renders unclear the therapeutic options<sup>1</sup>. We report the case of a 27-year-old pregnant woman who presented at the hospital for obstetrical management. The patient was in her 9th month of pregnancy. Transthoracic echocardiography revealed a ruptured sinus of Valsalva aneurysm and a fistula to the right ventricle with evidence of a continuous left to right shunt with repair done.

**KEYWORDS :** ruptured sinus of Valsalva, pregnancy, obstetrical management.

### INTRODUCTION

Aneurysm of a sinus of Valsalva is a rare congenital cardiac defect, first described by Hope in 1839. Thurnam in 1840 reported the first case of rupture of the sinus of Valsalva<sup>2</sup>. A sinus of Valsalva aneurysm is a rare cardiac anomaly thought to be caused by a deficiency of fusion of the media of the aorta with the annulus fibrosus of the aortic valve, or by actual detachment. Although most of these aneurysms are congenital in origin, they can also be acquired as the result of certain connective tissue diseases, such as Marfan syndrome.<sup>3</sup> These aneurysms usually originate from the right coronary sinus.<sup>4</sup>



There are few documented cases of a ruptured sinus of Valsalva aneurysm in a pregnant patient.<sup>5,6</sup> We report the case of a 27-year-old woman who was referred during her 9th month of pregnancy for obstetrical management. She was found to have a ruptured sinus of Valsalva aneurysm with left-to-right shunting into the right ventricle.

### Case Report

A 27 year old, 50Kg, G2P1L1 with 9 months of amenorrhea was

admitted to our hospital in December 2020 for obstetrical management. The patient presented with complaints of breathlessness, chest pain and occasional palpitation since last 2-3 months. She also complained swelling of both lower limbs which decreases after taking rest. She had normal vaginal delivery 3 years back. She complained of breathlessness and tiredness one year after vaginal delivery for which she consulted physician. She was informed that she has a heart disease and was diagnosed as ruptured aneurysm of right sinus of Valsalva with base of 16mm and underwent surgical correction of the heart ailment and was started on tab ecosprin 150 mg once a day.

On examination, her pulse rate was 88/minute, and B.P. 130/80mm of Hg, minimal pedal oedema was present. Respiratory system showed bilateral equal, normal breath sounds with no rhonchi or crepitations. On auscultation of cardiovascular system a loud continuous murmur was present over whole of the precordium. It was best heard along the lower left sternal border. The remainder of the examination was otherwise normal for 39.2 weeks of pregnancy. Routine blood investigations were normal with Hb 10.6gm% and INR 1.3. USG s/o of Single live intra uterine fetus of 38 wk 4 days maturity, cephalic presentation with AFI 8 cms.

Antibiotic prophylaxis was given with Inj Cefotaxim 1 gm. Patient went into spontaneous labour and delivered a female baby on 12/12/2020 at 9:45am. She delivered a 2.76 kg male baby with APGAR score of 8/10 and 9/10 at first and fifth minute respectively. There was no intrapartum complication. Mother had uneventful postpartum period while neonate received phototherapy for neonatal jaundice for 4 days. Both mother and baby were discharged on 10th postoperative day. Antibiotics were given for 72 hours. 2D echo were done both of mother and baby were done and both were normal.

### DISCUSSION

Sinus of Valsalva aneurysm makes up less than 1% of all congenital cardiac anomalies according to some reports, but it occurs at higher rates in patients of Asian origin.<sup>7,9</sup> The disease occurs more frequently in males and has a wide clinical spectrum.<sup>3</sup> The aneurysm can remain intact or can rupture, thereby causing symptoms that can be associated with detrimental effects.

All cases which have been reported so far usually presented at term or after previous diagnosis of aneurysm without clinical deterioration in the patient's condition. Surgical intervention was required 1 week postpartum in two cases<sup>6,10</sup>. One case which underwent surgical intervention at 29 weeks with the pregnancy continued till term.<sup>11</sup> Our case of ruptured sinus of Valsalva aneurysm and repair done 1 year back presented at term in labour. Clinical deterioration of the patient in the presence of hyperdynamic state questioned the mode of delivery. The patient had a normal vaginal delivery, as there

had been no obstetric indication for caesarean section and there was no residual shunt. This is probably the second case of ruptured sinus of Valsalva aneurysm repair with good maternal and foetal outcome.

## REFERENCES

1. Latzman J, Makaryus AN, Rosman D. Ruptured sinus of valsalva aneurysm in a pregnant woman. *Tex Heart Inst J*. 2006;33(1):66-69.
2. Goel L, Gautam P, C S. Ruptured aneurysm of right sinus of valsalva in pregnancy-a case report. *Indian J Anaesth*. 2009;53(1):88-93.
3. Friedman WF. Congenital heart disease in the adult. In: Braunwald E, editor. *Harrison's principles of internal medicine*. 15th ed. New York: McGraw-Hill; 2001. p. 1337-9.
4. Lijoi A, Parodi E, Passerone GC, Scarano F, Caruso D, Iannetti MV. Unruptured aneurysm of the left sinus of Valsalva causing coronary insufficiency: case report and review of the literature. *Tex Heart Inst J* 2002;29:40-4.
5. Pamulapati M, Teague S, Stelzer P, Thadani U. Successful surgical repair of a ruptured aneurysm of the sinus of Valsalva in early pregnancy. *Ann Intern Med* 1991;115:880-2.
6. Cripps T, Pumphrey CW, Parker DJ. Rupture of the sinus of Valsalva during pregnancy. *Br Heart J* 1987;57:490-1
7. Banerjee S, Jagasia DH. Unruptured sinus of Valsalva aneurysm in an asymptomatic patient. *J Am Soc Echocardiogr* 2002;15:668-70
8. Dong C, Wu QY, Tang Y. Ruptured sinus of Valsalva aneurysm: a Beijing experience. *Ann Thorac Surg* 2002;74:1621-4.
9. Au WK, Chiu SW, Mok CK, Lee WT, Cheung D, He GW. Repair of ruptured sinus of Valsalva aneurysm: determinants of long-term survival. *Ann Thorac Surg* 1998;66: 1604-10.
10. Vincelj J, Starcevic B, Sokol I, Sutlic Z. Rupture of a right sinus of val-salva aneurysm into the right ventricle during vaginal delivery: a case report. *Echocardiography* 2005 Nov;22(10):844-6.
11. Metgud M, Dixit M, Dhulked V, Kamath P. Successful Term Delivery Following Ruptured Sinus of Valsalva Aneurysm Repair at 29 Weeks of Pregnancy, *J Turkish-German Gynecol Assoc*, Vol. 9(2); 2008:103-104