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MULTIPARITY IN PATIENT WITH NON-CORRECTED FALLOT TETRALOGY

Bodian Malick, Sangaré Zoumana, Dr. Mingou Joseph Salvador*, Aw Fatou, Sarr SA, Ndiaye Mouhamadou Bamba, Archich Najoua, Kane Adama, Diao Maboury, Ba Serigne Abdou.

Cardiology Unit of the Teaching Hospital Aristide Le Dantec.

***Corresponding Author: Dr. Mingou Joseph Salvador**
Cardiology Unit of the Teaching Hospital Aristide Le Dantec.

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ABSTRACT

Congenital heart diseases are the most common birth defects affecting 0.8% of newborns. Maternal heart disease with uncorrected tetralogy of Fallot is associated with significant maternal morbidity and mortality worldwide. Rare cases of multiparity in patients with uncorrected Fallot tetralogy are described. In our context, we report a case of tetralogy of Fallot with two (02) completed pregnancies in a patient currently 28 years old. She is known to have had a tetralogy of Fallot since the age of 3 (June 1992). Post C-section follow-up showed no complications for both pregnancies. The children had good health without any notion of malformation. The control at 1 month post partum of this last pregnancy was good with a good hemodynamic state without complaint.

KEYWORDS: Tetralogy of Fallot, congenital cardiopathy, echocardiography, pregnancy, multiparity, Dakar.

INTRODUCTION

Congenital heart diseases are the most common birth defects affecting 0.8% of newborns.[1] In Senegal, Bodian et al. had a congenital heart disease prevalence of 0.89% in a study conducted in Koranic school "daara" population.[2] The tetralogy of Fallot is the first cyanotic congenital disorder.[1,2,3] Uncorrected Tetralogy of Fallot is prone to complications. Progress in terms of diagnosis and management, in particular surgery, has allowed a marked improvement in the survival of these patients, including those with complex lesions.[1] Uncorrected tetralogy-like maternal heart disease is associated with significant maternal morbidity and mortality worldwide and is the leading cause of maternal death in the United Kingdom.[4] The essential component of patient management is contraceptive counseling and the management of pregnancy and childbirth. Such care requires knowledge of congenital heart disease and close collaboration with the obstetrical team.

OBSERVATION

This is a 28-year-old patient, known to have a tetralogy of Fallot that has not been operated on since she was 3 years old (June 1992) and lost to follow-up. She was referred to us by her gynecologist who discovered a notion of follow-up in cardiology in childhood during the first pregnancy in 2014,. Thus we re-diagnosed the tetralogy of Fallot. She did not report an anoxic crisis. This pregnancy went well except for fatigue and two episodes of unconsciousness with convulsions that required the use of anticonvulsant and Propranolol. She was irregularly followed in the service with a check-up fixed for every 6 months. Eight months into her second pregnancy, she returns to see us with a note from her gynecologist. The examination noted a moderate fatigue, a fairly good condition, no clinical anemia a discrete perioral cyanosis, a discreet digital clubbing, and moderate lower limb edema. The blood pressure was 123/72 mmHg, the heart rate was 89 beats per minute and the SaO2 was 83%. Auscultation essentially perceived a systolic murmur of pulmonary stenosis 3-4 / 6. The pulse was present and the lungs normal. The patient presented a soft gravid uterus with a uterine height at 35 cm. In the biology, the hemoglobin level was at 13.5 g / dl and the hematocrit at 41.2%.

The electrocardiogram showed a regular sinus rhythm, a right axis at 120 ° and right ventricular hypertrophy. Transthoracic Doppler echocardiography found dilated right cavities with right ventricle (RV) hypertrophy at 10 mm, a sub-aortic ventricular septum defect with dextroposition of the aorta at 50%, tight infundibular stenosis with maximum gradient at 92 and mean at 56 mmHg, without regurgitation. The trunk of the pulmonary artery was not small as well as its branches. Moreover, there was the presence of some aorto-pulmonary collaterals. The left ventricle was neither dilated nor hypertrophied with good overall systolic function (67% Simpson biplane) despite flattened septal kinetics. Longitudinal systolic function was correct. The management of our patient was based on monitoring alone with iron intake and on close collaboration

between adult pedo-cardiologists and obstetricians. Contraception has been proposed after this pregnancy.

The evolution was favorable by later delivery by a C-section of an apparently healthy female child. The follow-up showed no complications and the control at 1 month post partum noted a stable patient with the regression of signs of right heart failure.

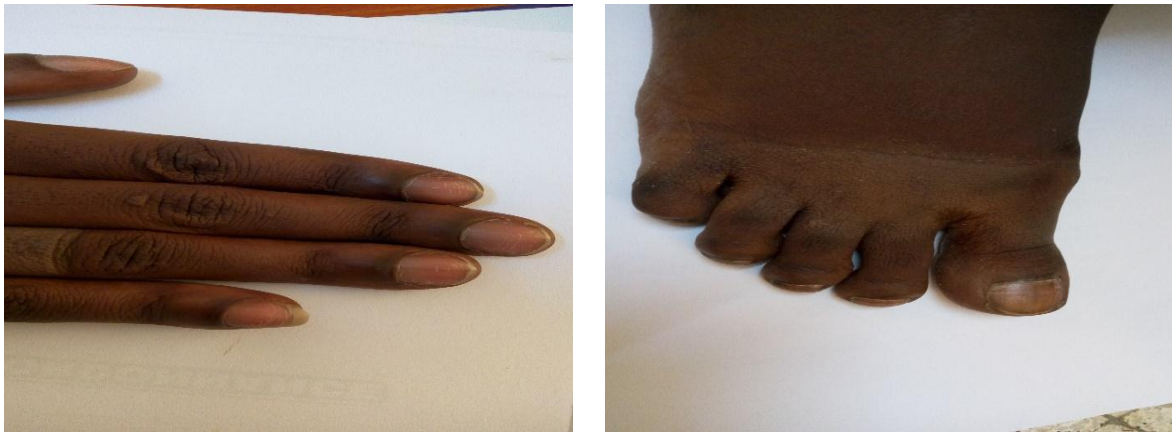

Figure 1: Images showing discreet digital clubbing in our patient.

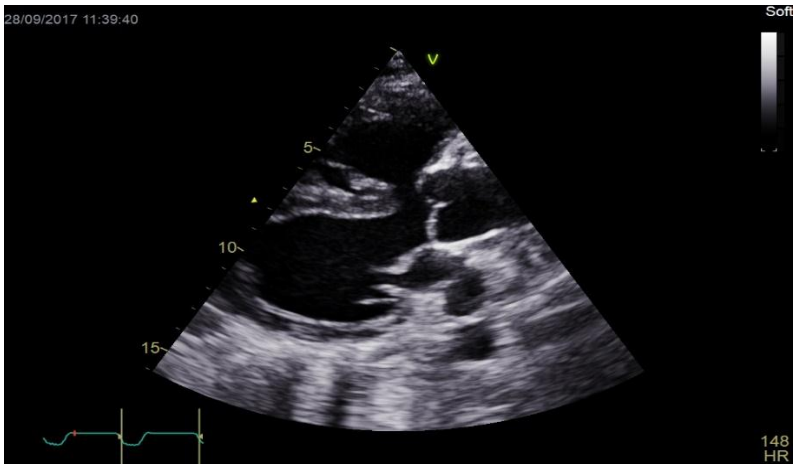

Figure 2: Echocardiography image, bidimensional para-sternal great axis (diastolic), showing ventricular septal defect (VSD) aortic dextro-rotation and right ventricular hypertrophy.

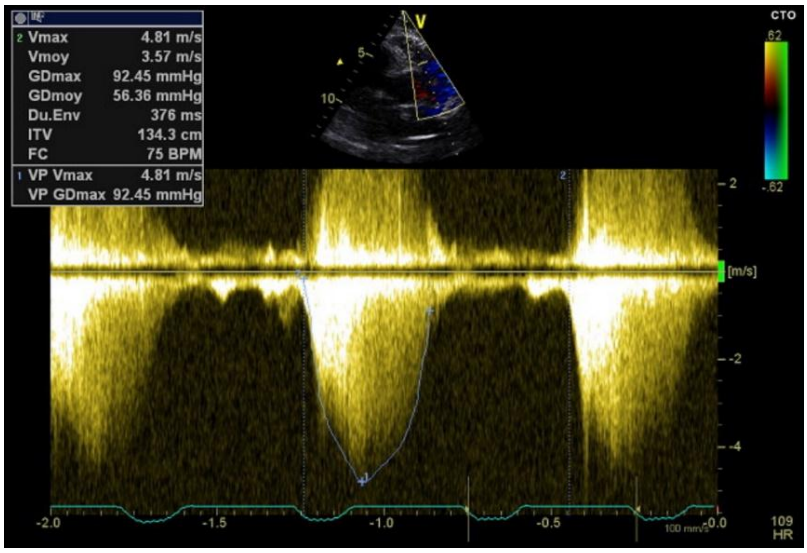

Figure 3 : Continuous wave Doppler showing the pulmunary stenosis flow.

DISCUSSION

Pregnancies in the corrected tetralogy of Fallot are rather well tolerated and poorly tolerated in the absence of correction thus constituting a high maternal risk of complications but also of death.[7] In a study of 42 patients with corrected tetralogy of Fallot, 7% had cardiovascular complications.[5] Our patient presented an uncorected tetralogy of Fallot that was tolerated well enough during thee pregnancies, despite symptoms of moderate fatigue and edema of the lower limbs. These are probably related to her pregnancy. Our patient has an overall well tolerated tetralogy of Fallot with discrete signs of her disease cyanosis, digital clubbing and moderate anemia. This explains the fact that she was lost offollow-up but also that her pregnancies are well tolerated. This in very probably related to the anatomical form of this patient's heart defect. In fact, the pulmonary artery has an acceptable caliber and there are aorto-pulmonary collateral which improve the pulmonary perfusion. In addition, hemodilution and hypervolemia related to pregnancy may help to improve signs by decreasing polycythemia and hyperviscosity.

Unoperated patients have a high risk of maternal and fetal death in case of congestive heart failure, impaired right ventricular systolic function or massive pulmonary regurgitation.[5] The contractile function of the RV of our patient was good and there was no pulmonary regurgitation. In our case, despite the non-correction of the congenital heart disease, our patient made two[2] pregnancies without major complications. The risk of recurrence of cardiac malformation in the fetus is high and varies according to the lesions, but is generally around 5 to 6% for children born to mothers with congenital heart disease.[6] In our patient, both[2] were free from any cardiac malformation.

CONCLUSION

The number of patients with congenital heart disease reaching childbearing age continues to grow. These heart defects once corrected or some even uncorrected tolerate well pregnancy. On the other hand, cyanotic heart disease were considered incompatible with pregnancy. In our regions, the diagnosis of heart disease is very late or not done. What poses the problem of these well tolerated heart diseases which will be confronted with the pregnancy with all the risks incurred by the young women of childbearing age, diagnosed with these defects. This is how we call on practitioners for screening of congenital heart disease during prenatal, school-age, preschool, birth and even antenatal visits.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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