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**THE RISK OF COARCTATION
OF THE AORTA IN
PREGNANCY
ORIGINAL CASE REPORT**

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OBJECTIVES

- The main reason for the presentation of this clinical case was to attract attention about the dangerous possible risks of the coarctation of the aorta in pregnancy because was undiagnosed early in condition that the patient was asymptomatic before pregnancy and didn't presented at the consultation.

MATERIAL AND METHODS

SYMPTOMS

- I present the clinical case of a young women patient aged 26, who was **pregnant in six months** and came for a consultation because she feels **headache, dizzy, and noises in the both years**. The value of the blood pressure was very increase **BP=230/130mmHg** and in the first moment was **interpreted in the context of pregnancy**.

OBJECTIVE EXAMINATION

- At the objective examination wasn't detected focal neurological signs. Heart sounds was rhythmic, rate heart=82 bates/min without extra sounds but with a **proto mezzo systolic murmur hearth in the aortic area grade III, without irradiation** and the same a **proto systolic murmur hearth in the mitral area, grade II, without irradiation.**

MATERIAL AND METHODS

- Because the patient was pregnant **this two murmurs heart with these characteristics was very difficult to interpretation** because in this context of pregnancy is possible to exist **innocent murmurs hearth** not necessary to suggest **an organic lesion of the heart** or a valve disease.

THE EKG

- The EKG shown sinus rhythm, rate heart=82bates/min, unexpected **left axis deviation** and also **left ventricular hypertrophy**.

THE EKG

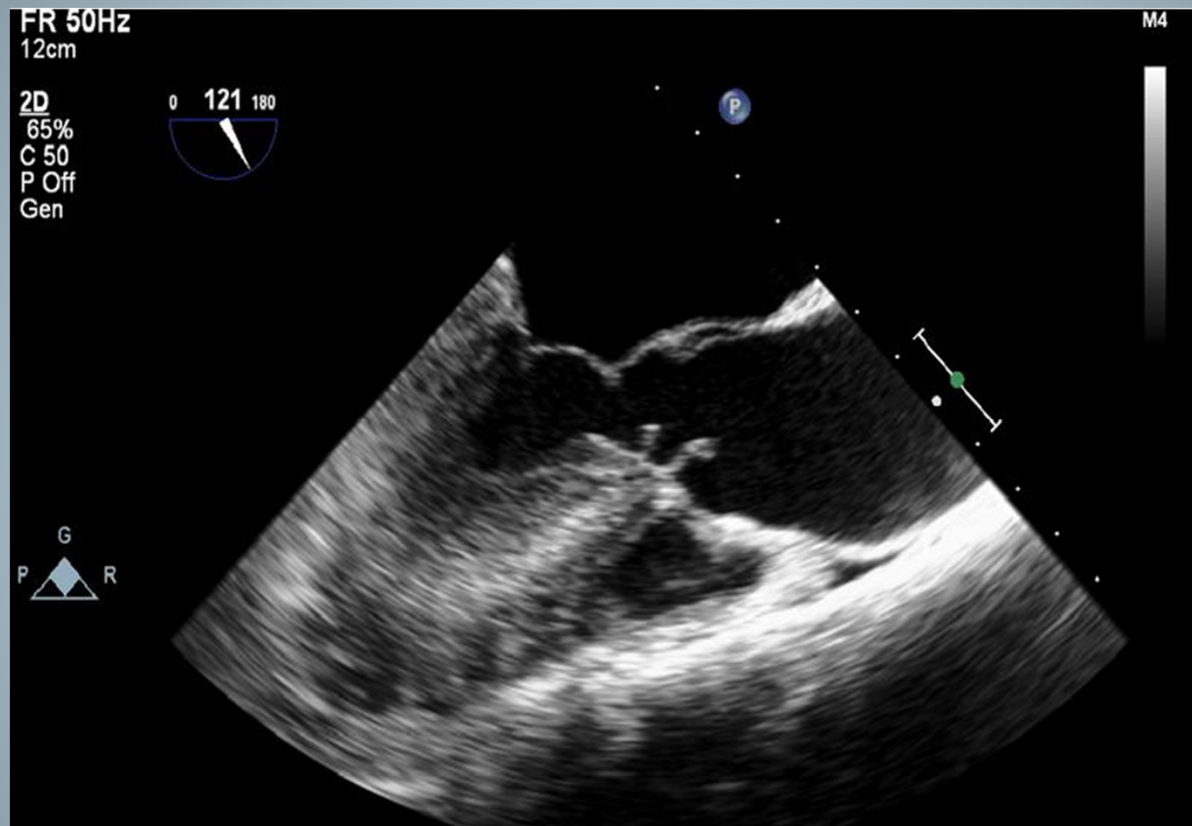


**EKG – Left ventricular hypertrophy and left axis deviation.
Index Sokolov Lyon –The R wave amplitude in lead V5 + the S
wave amplitude in lead V1 >35mm**

THE ECHOCARDIOGRAPHY

- The echocardiography confirmed **left ventricular hypertrophy** and was discovered an **unknown and unexpected coarctation of the aorta**. These were confirmed also after the echo Doppler echocardiography was performed. In rest all laboratory tests was in normal range.

THE ECHOCARDIOGRAPHY



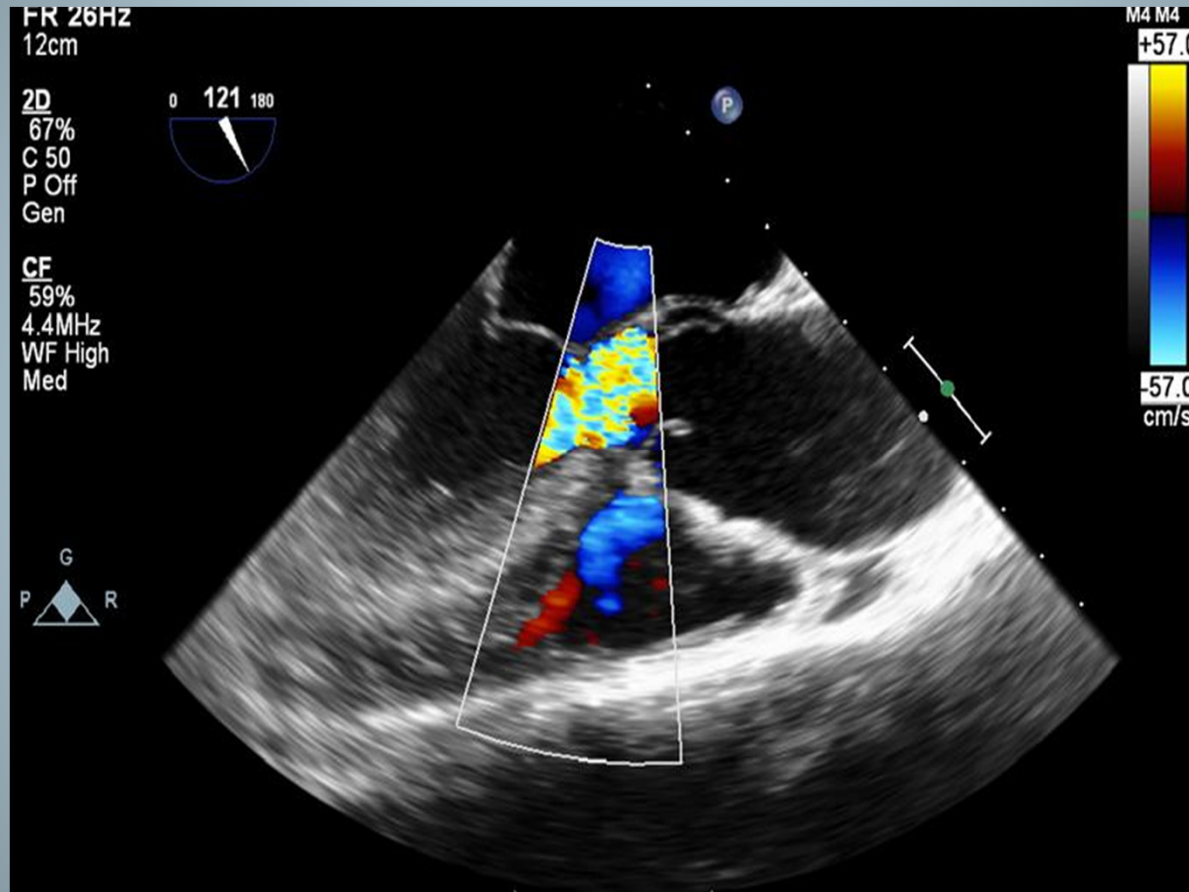
The echocardiography confirmed **left ventricular hypertrophy** and an **unknown coarctation of the aorta** were discovered.

THE ECHO DOPPLER ECHOCARDIOGRAPHY



**The echo Doppler echocardiography-
Coarctation of the aorta
Left ventricular hypertrophy**

THE ECHO DOPPLER ECHOCARDIOGRAPHY



**The echo Doppler echocardiography -
Coarctation of the aorta
Left ventricular hypertrophy**

DIAGNOSIS

- **PREGNANCY IN SIX MONTHS**
- **COARCTATION OF THE AORTA ,
SECONDARY CARDIOVASCULAR
HIGH BLOOD PRESSURE
SEVERE FORME AGRAVATE IN
PREGNANCY**

THERAPY

- The patient follows therapy with **labetalol 2X50mg/day**. After that the value of blood pressure decrease at the value 140/80mmHg in one week and maintain controlled with this medication in this dosages during the pregnancy and the rate heart was decrease at 72 bates/min.

EVOLUTION

- Because the patient want to has the baby and also was very late for an abortion because the patient was pregnant in six month she was monitories during the pregnancy but the evolution was favorable without other increase value of blood pressure or other incident.

EVOLUTION

- The patient gives birth at nine months by caesarian surgical intervention. The evolution of the patient after pregnancy was with **the reappear of the high blood pressure (BP=180/100mmHg) because was secondary cardiovascular hypertension in context of coarctation of the aorta.**

EVOLUTION

- In this condition she must to **continue the therapy with labetalol 2X50mg/day** with maintain the normal value of arterial hypertension (TA=130/80mmHg). She didn't want to follow medications all life and she agree to perform the cardiovascular surgical intervention for correction the coarctation of the aorta.

SURGERY INTERVENTION

- **The patient performed the cardiovascular surgical intervention for correction the coarctation of the aorta with good postoperative evolution and with normalization the value of blood pressure without medication.**

SURGERY PROCEDURE

- With a thoracotomy, the surgeon spreads the ribs and moves the lung out of the way. Because the aorta is outside the heart, cardiopulmonary bypass wasn't necessary. After locating the coarctation, the surgeon transiently occludes blood flow above and below the area of narrowing. With blood flow occluded, the surgeon removes the narrowed area and then sutures the remaining two ends together. This procedure is called an end to end anastomosis.

RESULTS AND DISCUSSIONS

- The undiagnosed congenital heart disease very early postpartum becomes very dangerous in pregnancy first because are more difficult to be diagnosis in this condition because in the pregnancy exist innocent's murmurs heart in this context and a congenital heart disease which develop organic murmur hearth it is possible to confuse.

RESULTS AND DISCUSSIONS

- Of course innocent murmurs heart are a few special characteristics such as: low grades, no irradiation, appeared at many focuses of auscultation, appeared and disappeared with the cause which produces this, are only systolic, but the differential diagnosis with an organic murmur heart remain difficult in pregnancy except the systolic murmurs hearth with very increase degree V or VI and diastolic murmurs heart.

RESULTS AND DISCUSSIONS

- I want to mention that this situation happened because this patient was complete asymptomatic before pregnancy and for this reason she didn't presented for a consultation before pregnancy and the coarctation of the aorta remain undiagnosticated and she came only in six month pregnant because now appear the principals symptoms for high blood pressure.

RESULTS AND DISCUSSIONS

- Consider that this unexpected and unhappy situation it is possible to repeat in our medical practice if the patient don't came early at the doctor in childhood to can discover the congenital heart disease.
- The best method is to make a screening echocardiography of the heart at the all new born to be shore that we discovered as early as possible the coarctation of the aorta and of course other congenital heart diseases or to be consulted by a cardiologist neonatology specialist.

RESULTS AND DISCUSSIONS

- The undiagnosed congenital heart disease in very early postpartum is very dangerous in pregnancy first because they are more difficult to diagnose in this condition because in pregnancy there exists an innocent heart murmur in this context and a congenital heart disease which develops an organic murmur heart it is possible to confuse them. Of course innocent heart murmurs have a few special characteristics such as: low grades, only systolic, no irradiation, appears at many foci and disappeared with the cause which produces it, but the differential diagnosis with an organic systolic murmur heart remains difficult in pregnancy except the heart murmur with a very increase degree IV, V or VI.

RESULTS AND DISCUSSIONS

- The second risk is the complications which are possible to appear in the pregnancy with the mother and the baby in context of an unknown congenital heart disease. The high blood pressure was secondary in the context of coarctation of the aorta aggravated in pregnancy and was also possible to be interpreted only in context of pregnancy.
- An increasing number of women with previously repaired coarctation of the aorta are now becoming pregnant; uncorrected coarctation may also present for the first time in pregnancy with hypertension. There are vital issues pertaining to maternal risk and management.

RESULTS AND DISCUSSIONS

- The first is the risk of aortic dissection, which is increased in the presence of a bicuspid aortic valve (reflecting concomitant ascending aortopathy). The second is restenosis, best assessed with echocardiography and MRI—which are safe in pregnancy. Despite moderate (RR)-coarctation, they would tolerate the pregnancy, with intervention after delivery (balloon dilatation and stenting being the preferred mode in these cases).

RESULTS AND DISCUSSIONS

- Fourthly, early discussion between cardiologist, internist, obstetrician and anaesthetist will allow planned management of pregnancy and delivery. It is recommending elective caesarean section, to avoid the second stage and to reduce the need for Valsalva manoeuvres with their associated surges in blood pressure; the potential for rupture of berry aneurysms is pertinent. Antibiotics should be prescribed at the time of delivery; the only two cases of maternal death with coarctation and pregnancy in the mortality statistics 1997-99 were associated with endocarditis .

RESULTS AND DISCUSSIONS

- The second risk is the complications which are possible to appear in the pregnancy with the mother and the baby in context of an unknown congenital heart disease. The high blood pressure was secondary in the context of coarctation of the aorta aggravate in pregnancy and also was possible to be interpreted only in context of pregnancy.

CONCLUSIONS

- **1.** Coarctation of the aorta is a congenital heart disease which evolves with cardiovascular secondary hypertension. Undiagnosed in time, early postpartum or in childhood can be very risky later in women, because pregnancy can aggravate hypertension and may be misinterpreted as gestational hypertension, with regard to the real diagnosis of coarctation of the aorta, which may worsen the prognosis of the patient, especially since in the pregnancy there may appear innocent heart murmurs and that makes it difficult to interpret a heart murmur at cardiac auscultation.

CONCLUSIONS

- 2. Hypertension during pregnancy is an important issue, primarily because of consequences that may occur to the fetus and secondly by not considering other causes of secondary hypertension in young women, some of them even may contraindicate further development of the pregnancy, such as coarctation of the aorta.

CONCLUSIONS

- **3.** Evolution of hypertension by coarctation of the aorta can be severe if the lesion is closed. In addition to the occurrence of childhood and adolescence, hypertension may be complicated by bacterial endocarditic, aortic rupture and haemoperitoneum (especially during pregnancy) of the abdominal aortic aneurysm- with which it can coexist unknown on the previous diagnosis, dissecting aneurysm of aorta and cerebral hemorrhage (when coarctation in association with cerebral aneurysms) with high risk of sudden death.

CONCLUSIONS

- 4. We must make an effort in our medical practice to discover this congenital malformation as early as possible in the new born stage with a screening echocardiography method and to solve in the Cardiovascular Surgery Department in time to prevent these possibly unhappy events later in life.

CONCLUSIONS

- **5.** Because the coarctation of the aorta can coexist with an abdominal aortic aneurysm and cerebral aneurysms unknowns, the most dangerous complications in pregnancy could be hemoperitoneum after rupture of the aneurism of the aorta with sudden death and also sudden hemorrhagic stroke attack after the cerebral aneurysms breaks in context of high blood pressure secondary to the coarctation of the aorta and aggravated in the last months of pregnancy in pre eclamsia-eclampsia. For this reason this congenital heart disease need a special consideration.

CONCLUSIONS

- 6. I am sure that maybe many doctors didn't select for presentation a clinical case with this situation or try to cover the case because of course this situation doesn't must to happened, but sometimes the diagnosis of coarctation of the aorta it is possible to escape at the diagnosis at time in the newborn stage or in childhood and because later the patient was asymptomatic and didn't consult a doctor only in moment of pregnancy this was the result. We must to make efforts in our medical practice to discover as early as possible this special congenital heart disease and to avoid this situation in the future.

FLOWERS FOR YOUR



Thanks' for your kind attention!!!!!!



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