

## Endovascular Treatment of Coarctation of the Aortic Isthmus in a Pregnant Woman

O.Elmahi\*, A.Benzirar, T.Abutayf, H. ALzaarir, O.Anane, A. Rezziki

Department of vascular surgery, Mohammed VI University Hospital, Faculty of Medicine and Pharmacy of Oujda, Mohammed 1<sup>st</sup> University, Oujda, Morocco.

\*Auteur correspondant : Omar elmahi: [omarelmahi@yahoo.fr](mailto:omarelmahi@yahoo.fr)

Adnane benzirar: [b.adnane@yahoo.fr](mailto:b.adnane@yahoo.fr)

Taha abtayef: [tahaabtayef@gmail.com](mailto:tahaabtayef@gmail.com)

Houssam Alzaarir: [hussamzaarir141990@gmail.com](mailto:hussamzaarir141990@gmail.com)

Oussama anane: [oussanane@gmail.com](mailto:oussanane@gmail.com)

Abdellah Rezziki [dr.rezziki.abdellah@gmail.com](mailto:dr.rezziki.abdellah@gmail.com)

Received: 09 August 2019 | Accepted: 19 August 2019 Published: 28 August 2019

**Introduction:** Coarctation of the aorta is a common congenital malformation with an estimated incidence of 3.2 per 10,000 births [1]. Achievement of the isthmus represents only 0.5 to 2% of all coarctations [2]. It is very often discovered in children.

**Materials and Methods:** We report a case of Coarctation of the aortic isthmus of incidental discovery in a 35-year-old pregnant woman of 10 weeks of amenorrhea, having as antecedent an HTA for 5 months poorly followed. She was admitted in emergency for the rapid progressive installation of a ptosis on the left. The general examination at admission revealed a TA of 240/110 mmHg in both upper limbs and an abolition of femoral pulse.

Cardiac auscultation revealed the presence of an intense medio-thoracic systolic murmur conducted to the backs.

The diagnosis of Coarctation was suspected and confirmed by CT angiography, which showed a very tight and short stenosis of the aortic isthmus (figure 1), with the presence of a right intra-cavernous carotid artery aneurysm measuring 15 mm.

**Results:** The procedure was performed under general anesthesia with surgical approach of the right scarpa using a 10F short sheath. The patient underwent angioplasty with placement of a Palmaz stent (4.6 x 40 mm), the Palmaz stent was manually impacted on an 18 / 40mm balloon, the assembly was protected by an angiography probe during its introduction. (Figures: 2; 3 and 4).

This type of surgery could not be designed without therapeutic interruption of the pregnancy 3 days before.

Blood pressure decreased and was stabilized by low dose IC. CT scan at 2 weeks showed good permeability of the stent area and diameter stability of the carotid aneurysm

**Discussion:** In adults, current recommendations for defining therapeutic indications are based on the field (age, hypertension, gradient) and imaging. It is therefore recommended to treat a coarctation responsible for a pressure gradient greater than 20 mmHg at rest and 40 mmHg at exercise [3, 4]. In general, it is lawful to treat a young, hypertensive patient with significant coarctation [3]. The choice of technique, whether surgical

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or endovascular, depends mainly on the type of coarctation and the terrain. In particular, the discovery of aortic coarctation during pregnancy is associated with high mortality (3 to 10% according to the authors) [5, 6],

Especially as the blood pressure figures are high. We present a case of coarctation discovered early in the first trimester. The therapeutic interruption of pregnancy has been indicated in this patient.

Endovascular treatment is an established, safe and effective alternative to surgical treatment [7], and stenting, especially uncovered stents, is almost systematic in adults [8].

**Conclusion:** Native coarctation in young adults should always be treated. Endovascular treatment represents a very interesting alternative to avoid all the complications inherent in conventional treatment. The main message remains that of lifetime clinical and imaging monitoring.

**Image: 1**



**Image: 2**



**Image: 3**

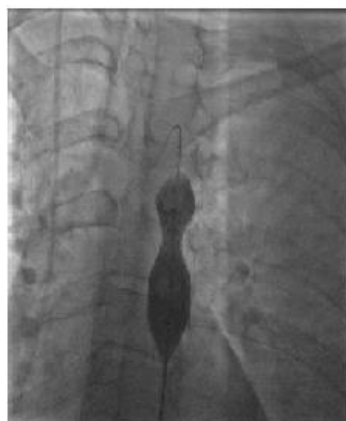


Image: 4



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