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Endoarteritis in adult with tetralogy of Fallot

Endoarterite em adulto com tetralogia de Fallot

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CLINICAL DATA

The case of a 28-year-old white male laborer is reported. At 7 years old he was diagnosed as having a congenital heart disease and was clinically followed until the age of 14 when the family still did not accept the necessity of surgical intervention. One year and six months prior to this current report, even though he was not hospitalized at this time, he presented with hemoptysis over a period of 8 months evolving with dyspnea at the slightest effort, visual cloudiness and cephalea but without fever.

On admittance to hospital he was in a good general condition, ruddy, hydrated, eupneic at rest but cyanotic and malnourished. His thorax was symmetrical with ictus cordis palpable at the 5th left intercostal space and the heart rhythm was regular with two clicks, normal phonetic sounds, with an ejective systolic murmur 2+/6 at the left sternal border with irradiation to the left dorsum region. Pulmonary auscultation was normal. The blood pressures were normal for the four

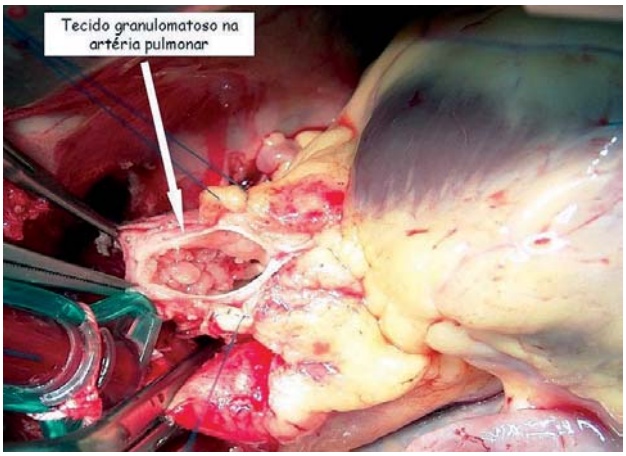

Fig. 1 – Pulmonary artery opened lengthwise with a great quantity of granulomatous tissue obstructing the root of the left pulmonary artery.

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limbs and the extremities had normal pulses and cyanosis (peripheral saturation was 83%).

ELECTROCARDIOGRAM

The electrocardiogram demonstrated sinus rhythm and a heartbeat of 100 bpm. The ÂP was +60 and the ÂQRS was +120 without direct signs of atrial or ventricular overloads with the exception of the T-wave at V1 suggestive of right ventricle overload. A rapid transition of the voltage of the QRS complex from V1 to V2 and a slight to moderate block of the right branch were evidenced.

RADIOGRAM

The radiogram showed visceral situs solitus with levocardia and a cardiothoracic index of 0.47. The middle arch was slightly bulged. Additionally, peripheral hypovolemia was seen with the aorta to the left.

ECHOCARDIOGRAM

The echocardiogram showed situs solitus with levocardia. The venoatrial, atrioventricular and ventriculoarterial connections were concordant. An interventricular shunt (IVS) was observed with its greatest diameter being 20 mm. Pulmonary valve stenosis with an annulus measuring 11 mm and pulmonary artery with 10 mm were also identified. There were no visible abnormalities of the route of the pulmonary arteries. Right ventricle hypertrophy with moderate dilation, a slight reduction in the contractility, diastolic dysfunction and a myocardial performance index of 0.60 were also evidenced. There was also slight aortic insufficiency and moderate insufficiency of the tricuspid valve.

DIAGNOSIS

The echocardiogram confirmed the coronary cineangiography of the patient 21 years previously which indicated Tetralogy of Fallot with a bad anatomy including hypoplasia of the pulmonary valvar annulus, the aorta to the left of the backbone, normal coronary arteries and normal pressure in the pulmonary artery.

OPERATION

A median transsternal thoracotomy was performed and a cardiopulmonary bypass at 28 ºC was established. The pulmonary artery trunk was opened and a granulomatous vegetation with a whitish appearance was observed suggestive of a chronic injury (endocarditis). This started in the region of the arterial duct, obstructing the root of the left pulmonary artery and continuing within. This vegetation was thoroughly resected and the pulmonary artery, pulmonary valve ring and right ventricle outflow tract were enlarged and a 21 mm monocuspid bovine valve was implanted. The IVS was closed in the normal way with a bovine pericardial patch after removing the septal and anterior leaflets of the tricuspid valve. Notice the great hypertrophy of the interventricular septum causing a smaller IVS than is normal in children with Tetralogy of Fallot. The perfusion and myocardial ischemia times were 116 and 103 minutes, respectively. The patient had an uneventful evolution and was only released from hospital on the 9th postoperative day due to the necessity of pulmonary physiotherapy. It is important to stress the difficulty to analyze the right and left pulmonary arteries in adult patients using echocardiograms and the necessity of care by the surgeon to adequately diagnose and treat this disease in the intra-operative period [1].

REFERENCE

1. Schaff HV, Danielson GK. Advances in surgical management of congenital heart disease in adults. Cardiovasc Clin. 1987;17(3):221-38.