

Medical Expertise

"Development of the European Network in Orphan Cardiovascular Diseases"
„Rozszerzenie Europejskiej Sieci Współpracy ds Sierocych Chorób Kardiologicznych”

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CASE SUMMARY

35 years old male with corrected tetralogy of Fallot modo Waterstone in 1977 and reoperation with total correction in 1981 and surgical correction of coarctation of the aorta (CoA) with by-pass prothesis implantation followed by stent implantation due to re-coarctation (1994, 1995) was admitted with a suspicion of sequent re-coarctation. Additionally, he has double aortic arch with occluded posterior arch distal to left subclavian artery branch-of, arterial hypertension (ESC class II). Hemodynamic assessment revealed significant gradient in the region of previously implanted stents to the thoracic aorta. Angio CT showed additionally, stenosis of the left pulmonary artery. Right heart catheterization did not reveal signs of shunts or pathological gradients in the right heart or pulmonary arteries. No pulmonary stenosis was confirmed. Percutaneous balloon angioplasty with stent implantation was performed (12. 2012). After the procedure patient was in good clinical condition. Few months later episodes of atrial fibrillation appeared. Echocardiography showed enlargement of both right atrium and right ventricle and significant pulmonary valve regurgitation.

DISCUSSION

Tetralogy of Fallot (ToF) is one of the most common cyanotic congenital heart disease. Surgical correction is the procedure of choice. It is usually performed in childhood and might reappear. Long term prognosis is considered to be much better if the surgical

procedure was performed. More than 90% of patients after surgery reach adulthood and clinically present active and healthy.

Coarctation of the aorta (CoA) presents as a congenital narrowing of the lumen of the aorta located most commonly in the upper thoracic aorta but can occur in the abdominal aorta as well. Males are more often affected than females. Clinical symptoms are variable and depend on the position, degree and extent of the narrowed segment of the aorta. Traditionally the treatment requires open heart surgery. Percutaneous intervention is becoming nowadays more common and the results are good. Still recurrence of the disease and aortic dissection remain to be the worst disadvantages of both treatments [1, 2].

EXPERT'S OPINION

Due to the fact of relative fast progressive disease of the pulmonary valve, long and recurrent history of invasive, surgical treatment in the past and recent echocardiographic findings percutaneous pulmonary valve implantation seems to be the best option for the patient in the nearest future [3]. The first transcatheter pulmonary valve was implanted in 2000 and it became commercially available in 2006 [4]. The experience of Eicken A. et al based on 100 percutaneous interventions showed low complications rate and improved significantly hemodynamics of the patients. Although authors find the procedure challenging and suggest that long term follow up is needed [5]. At 1 year follow up patients sustained good hemodynamic result and prolonged phase of maintained cardiac function was observed. There was no evidence for further positive functional remodeling beyond the acute effects of the procedure [6].

CONCLUSION

Percutaneous repair of pulmonary regurgitation should be taken under consideration

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