

## 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**

This is the history of 75-year-old male with pulmonary stenosis. The patient presents symptoms of dyspnea, chest pain and decreased exercise tolerance and was also treated for hypertension, hyperlipidaemia, coronary artery disease and carotid artery stenosis. He was smoking 20 cigarettes/day. In the standard 12-lead ECG there were no ST-T changes. Echocardiography revealed normal left ventricle systolic function, right ventricle hypertrophy, right atrium enlargement, dilatation of the pulmonary trunk up to 38 mm and left pulmonary artery up to 34 mm, increased gradient in right ventricle outflow tract to 75/39 mmHg. There was a mild aortic and pulmonary regurgitation. Right heart catheterization showed significantly increased systolic pressure in right ventricle- 107 mmHg, the pressure in pulmonary artery was 40/9/25 mmHg. Lab tests revealed RBC  $5.23 \times 10^3/\mu\text{l}$ , Hb 17.4 g/dl, HCT 49 % and PLT  $196 \times 10^3/\mu\text{l}$ , SatO<sub>2</sub> 98%.

Actually he has the systolic murmur along upper left sternal border and no peripheral oedema as well as no liver enlargement. He is hemodynamically stable, NYHA II.

#### **DISCUSSION**

It's known that percutaneous balloon pulmonary valvulotomy (BPV) is the treatment of choice for isolated congenital pulmonary valvular stenosis (PvS) in childhood, but experience of this procedure in the adult is limited.

Ghannam and colleagues (1) presented results of 34 adult patients (pts age 20 to 47 years) with severe or moderate PvS who underwent BPV. Success was obtained in 81% of cases and pulmonary artery-right ventricular pressure gradient decreased from  $113 \pm 35$  to  $32 \pm 13$  mmHg ( $p < 0.001$ ) after valvuloplasty. The authors suggested that the poor results were in patients with dysplastic valves.

The longitudinal observation revealed that after valvuloplasty no cases of restenosis were observed. The authors conclude that percutaneous pulmonary valvuloplasty in the adult is the best method of treatment adults affected PvS and results are good.

Giannoglou and al. (2) investigate the prevalence of adult congenital heart disease and found that pulmonary valve stenosis was observed in 11.3%,

Interesting paper by Jarrar and his group (3) depend the long-term effectiveness of BPV in adults. The study group consists of 62 PvS patients after BPV. They found that BPV as a treatment of typical pulmonic valve stenosis produces excellent long-term results. Restenosis is rare (4.8%) and occurs more frequently in patients with dysplastic valves.

In turn Roos-Hesselink and colleagues (4) introduced the long-term (>20 years) survival and clinical outcome in patients who underwent surgical repair for isolated PvS. They found that long-term survival and quality of life are good but regurgitation of the valve was found in about 30% of the patients

Fawzy and his group (5,6) presented the long-term results (up to 17 years) of pulmonary balloon valvuloplasty in adults. They analysed in 90 consecutive patients in whom the pulmonary balloon valvuloplasty was performed. The authors found that long-term results of BPV in adults are very good although the new pulmonary regurgitation (mild) was noted in 28% after PBV.

Interesting paper by Lip and his group (7) about percutaneous balloon valvuloplasty for congenital pulmonary valve stenosis in adults showed, that pulmonary valvuloplasty is well tolerated and BPV is an effective treatment for isolated PvS in adults.

Fernandes and colleagues (8) present a case of pulmonic stenosis with large aneurysmal poststenotic dilatation that was safely and effectively treated with balloon valvuloplasty. They concluded that balloon valvuloplasty should be considered the treatment of choice in this situation

## EXPERT'S OPINION

The patient is relatively in a stable clinical condition in this moment despite several problems. Balloon valvuloplasty seems to be a safe method for him in this moment.

## CONCLUSION

In my opinion the patient should be presented to the balloon dilatation (BPV) of the stenotic pulmonary valve

## REFERENCES

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