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STUDIUM PRZYPADKU / *CLINICAL VIGNETTE*

An unusual couple: Bjork-Shiley aortic and Smeloff-Cutter mitral prostheses — 42 years in action

Niezwykła para: zastawka aortalna Bjork-Shiley i zastawka mitralna Smeloff-Cutter — 42-letnia obserwacja

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In the early 1960s, in Stockholm, Drs Viking Bjork and Donald Shiley developed a tilting Delrin polymer disc valve, the so-called flat-disc Bjork-Shiley valve.

At the same time in California, Dr Edward Smeloff was developing the first prosthetic valve to employ the 'full-flow' orifice concept thanks to a double set cage with an equator-seating ball (this is now known as the Smeloff-Cutter valve).

Our patient was a 20 year-old woman ill due to a severe aortic and mitral stenosis caused by rheumatic disease when in 1970 she underwent a surgical double valve replacement with Bjork-Shiley aortic and Smeloff-Cutter mitral prostheses.

Over the last decade, we have continuously followed the patient with six-month echocardiography: she is now 62 years old and she is in NYHA functional class II.

The Bjork-Shiley aortic valve had a normal peak and a mean gradient with a mild perivalvular leakage (Fig. 1).

Three-dimensional echocardiography allowed a complete study of the 'full-flow' orifice of the Smeloff-Cutter mitral valve: the prosthesis had normal haemodynamic profiles (Fig. 2).

The prosthetic valves in our patient have been functioning well for more than 42 years; they represent the longest functioning Bjork-Shiley valve in the aortic position, and the second longest functioning Smeloff-Cutter valve in the mitral one.

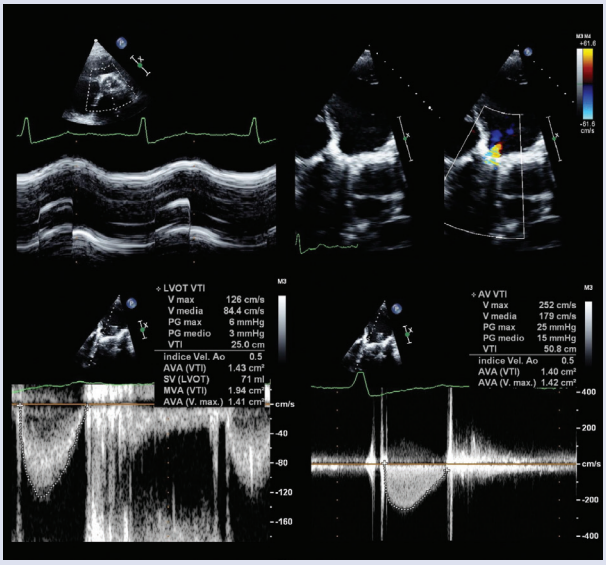

Figure 1. Bjork-Shiley aortic valve: composite picture

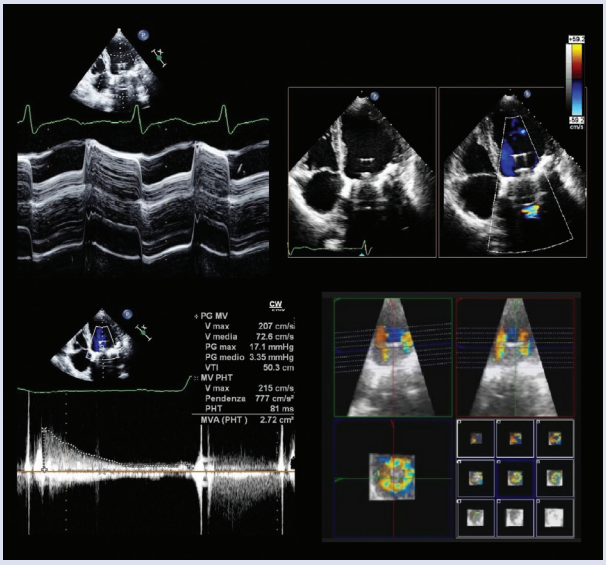

Figure 2. Smeloff-Cutter mitral valve: composite picture

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