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## Long-term follow-up of patients with rheumatic heart disease: a 41-year prospective and retrospective study between 1975 and 2016

### Abstract: 4112

#### Long-term follow-up of patients with rheumatic heart disease: a 41-year prospective and retrospective study between 1975 and 2016

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**Background:** The population of patients (pats.) with rheumatic heart valve disease almost disappeared in Central Europe; however, it is well known that this disease was rather common in the 1960s and 70s in this region. Our aim was to monitor the natural history of those not treated and those treated with valve replacement. Our method was as follows: 161 pats. collected between 1975 and 1976 were followed prospectively till 1996, then retrospectively from 1997 to 2016 (Group A).

**Results:** The 161 pats. were diagnosed with the following conditions: mitral stenosis: 53, mitral regurgitation: 26, mitral stenosis and regurgitation (both): 22, aortic stenosis: 6, aortic regurgitation: 18, both: 14, multivalvular: 22. The female/male ratio was 96/65 (1.5). 106 pats. (66%) were class I-II and 55 (34%) were class III-IV by NYHA classification. The mean age was 35.9 ( $\pm 6.9$ ) years. By the end of 1976, the patient population dropped to 151 with 6 deceased and 4 lost, and the proportion of pats. operated on was 36/151 (23.8%), including 3 with artificial valves. Long-term follow-up commenced in 1977 with 151 pats. By 1979, the number of pats. decreased to 113 with 82 (73%) in class I-II and 31 (27%) in class III-IV. The female/male ratio was 69/44 (1.6). The proportion of pats. operated on was 31/113 (27.4%), including 14 with artificial valves. By 1988, the number of pats. with artificial valves (Group B) reached 50 with 32 pats. (64%) in class I and 18 (36%) in class II, i.e. fit for work. The mean age was 49.4 ( $\pm 8.4$ ) years. In 1996, the number of pats. shrank to 39 due to death and the female/male ratio was 2.0. Between 1975 and 1996, the 50 pats. in Group B encountered 60 mechanical and 10 biological heart valves due to multiple replacement cases and replacements between 1988 and 1996. Between 1988 and 1996, the mortality rate in pats. who also carry biological valves was 6/10 (0.6) vs. 11/60 (0.18;  $p < 0.05$ ) in pats. with exclusively mechanical valves. The survival rate in Group B, which was mathematically estimated till 2008 based on the mortality rate of the group between 1988 and 1996, was in good correlation with the actual rate. On the final closure of the study in 2016, there were only 5 women alive. The mean age was 72.0 ( $\pm 9.5$ ) years with a maximum of 84 and a minimum of 56. 3 of the 5 pats. carried an unreplaced single tilting-disc valve, one of which was 40 years old. In 2014, a thorough search revealed an unoperated 71-year-old patient in Group A with mitral stenosis (mitral area = 1.5 cm<sup>2</sup>).

**Conclusions:** Survival rates and quality of life in treated rheumatic heart valve disease patients (especially females) with artificial valves are favourable. Biological valves were unsatisfactory even if replacement was successful. In rare cases, patients with rheumatic mitral valve stenosis may live for almost forty years without an operation. Group survival can be mathematically estimated several years ahead in homogeneous groups of rheumatic patients.