

Pregnancy outcomes in women with mechanical prosthetic heart valves: a retrospective case series analysis

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Abstract

Introduction: Pregnant women with mechanical prosthetic heart valves (MPHV) are reportedly at high risk of mortality and morbidity. We aimed to compare outcomes at our specialist centre with national data, and whether anticoagulation regimes influenced outcome. **Methods:** We conducted a retrospective cross-sectional study of all pregnant women with MPHVs managed by our service between 2003-2021. Maternal and fetal outcomes and anticoagulation data were collected. Summary statistics and comparative analysis with results from the national UK-wide dataset were compiled. **Results:** A total of 50 pregnancies in 23 women were identified. Patients with complex valve replacements were common, with 34.8% of pregnancies involving management of dual MPHVs. Maternal mortality was zero (95% CI: 0-7.1). Serious maternal and obstetric complications occurred in only 7 pregnancies (14.0%; 95% CI: 7.0-26.2%), including only two valve thromboses (4%). Live births followed 31 of the pregnancies (62%), compared with a national baseline of ~75%. Low molecular weight heparin was the most commonly used anticoagulant during pregnancy (84%), but no single anticoagulation regime was found to be universally optimal. Concomitant low-dose aspirin was given to those with dual or systemic mechanical atrioventricular valve replacement. **Discussion:** Our study is the largest single centre report on maternal outcome for women with MPHVs. We share how comprehensive, multidisciplinary planning may significantly reduce mortality and morbidity for our patients. Anticoagulation management should be individualised according to patient risk profile. With appropriate peripartum care, risk for women with MPHVs considering pregnancy may be lower than previously reported

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