

STROKE VOLUME ESTIMATION BY RHEO-ECHOCARDIOGRAPHY DURING
ATRIAL FIBRILLATION CONVERTED TO SINUS RHYTHM

T. Pałko, J. Kompiel, K. Ilmurzyńska

Postgraduate Medical Centre, Warsaw, Poland

The purpose of the study was to investigate changes in stroke volume /SV/ and cardiac output /CO/ in the course of atrial fibrillation and after electrical cardioversion. Impedance and echocardiographic methods were used. 15 patients were examined by both methods, before and after cardioversion restoring the sinus rhythm. The clinical results indicate that SV during atrial fibrillation in the resting state is changing very markedly. It depends not only on the ventricular filling time. We suggest that influence of the atrial activation conducted to ventricular activation changing electro-mechanical coupling affect should be considered. In this situation CO measured during over 1 min is almost constant in spite of very large beat - to - beat SV changes. Immediately after synchronized electrical atrial defibrillation SV and CO appeared virtually stable. CO value after cardioversion is usually distinctly higher than during atrial fibrillation. The observed changes depends mainly on the cardiac situation and to a smaller extent on the heart rate. Simultaneous rheo-echocardiographic examination appear to be useful for evaluation of haemodynamic effects of cardioversion.