A Young Patient with mid-Septal accessory pathway accompanied by left ventricular dysfunction

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Introduction

Wolff-Parkinson-White (WPW) pattern with septal accessory pathway might cause early septal activation and provoke left ventricular dyssynchrony and impaired cardiac function. Studies showed that reduced LV-function (LV EF < 55%) is more pronounced with midseptal and parahisian pathways when compared with posteroseptal pathways. An early activation of the basal septum will induce segmental contraction which is unopposed by the activation of the remaining LV-Myocardium. Catheter ablation of the accessory pathway may abolish the mechanical dyssynchrony and improve the cardiac function.

Case report

A 16-years old patient suffered from highly impaired LV-function (EF 30%) due to asynchronous ventricular activation because of a midseptal accessory pathway (AP). The Patient is a refugee from Nigeria who presented to our outpatient clinic because of progressive limitation of his physical capacity. X-Ray showed cardiomegaly. Apart from two episodes of syncope there were no symptoms reported. Echocardiography revealed an asynchronous septal motion with systolic bulging. A successful resynchronization was achieved by catheter ablation of the AP. Following an improvement of both the synchrony and LV-function could be seen. Despite sustained synchronous ventricular activation in 5 weeks follow up LV-EF was still slightly reduced (EF 50%). This unexpectedly long persistence of systolic dysfunction is presumably explained by the duration of asynchronous ventricular activation of over one decade.

Conclusion

Catheter ablation of septal pathways may restore synchronous ventricular activation and present a causal therapy in patients with accessory pathway induced ventricular dyssynchrony.

References

1. Tomaske M. at al " Adverse effects of wolff-parkinson-white syndrome with right septal or posteroseptal accessory pathways on cardiac function. Europace 2008 ;181-189