**INTRODUCTION**

Hypogonadism has been associated with cardiovascular disease. However, little is known about the cardiovascular impact of hypogonadism during development. Using hypospadias as a surrogate of hypogonadism, we investigated whether hypospadias is associated with vascular dysfunction during childhood and whether it is a risk factor for adult cardiovascular disease.

**AIM**

To investigate the association between hypospadias, as a surrogate for early onset hypogonadism and cardiovascular dysfunction across the lifespan.

**HYPOTHESIS:**

Boys with hypospadias exhibit vascular dysfunction and evidence of impaired cardiovascular outcomes in adolescence and adulthood.

**METHODS**

The vascular dysfunction was mediated by increased reactive oxygen species (ROS) generation and associated with epigenetic alterations.

- First study to date examining vasoreactivity by wire myography in paediatric blood vessels.
- Boys with hypospadias demonstrate increased vasoconstriction and impaired vasorelaxation.
- Adolescents with hypospadias have increased CIMT SDS and systolic blood pressure SDS.
- Young men born with hypospadias are at increased risk of arrhythmia, hypertension and heart failure.
- Need for longitudinal studies to assess the clinical implications of these findings.

**CONCLUSIONS**

**ACKNOWLEDGEMENTS**

Patients and their families.

The British Heart Foundation.

Mason Medical Research Foundation.

**CONTACT INFORMATION**

angela.lucas-herald@glasgow.ac.uk

@lucas_herald