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Back to the vitals: A treatable renal cause of hypertension



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I present the case of an 11-year old healthy male who presented to his family doctor with a single episode of macroscopic haematuria. The only abnormality noted on physical examination was an elevated blood pressure (148/110 mmHg). Stage 2 hypertension was subsequently confirmed on 24-hour ambulatory blood pressure monitoring and he had an outpatient renal ultrasound scan (normal). On review, the child's blood pressure remained elevated and normal investigations included: echocardiogram, renal function tests, urinalysis (resolution of haematuria) and catecholamine levels. Abnormalities in plasma aldosterone 1,313 mmol/L (reference range, 102 to 670) and direct renin 148 mIU/L (6-103) levels were noted however, a normal renin:aldosterone 16mg/mmol ratio was maintained.

Computed tomography angiography aorta was carried out confirming two right sided renal arteries, with an area of stenosis at the origin of the lower-pole vessel (A). In this case, the stenosis is presumed secondary to fibromuscular dysplasia. The patient remains well on amlodipine however, stenting may be indicated in the future.

This child's blood pressure reading placed him well above the 95th centile for his age and height classifying him as having Grade 2 Hypertension. Recently published blood pressure guidance in Pediatrics 2017 recommend annual blood pressure measurements for all children over the age of three years, regardless of risk factors, which is not currently standard practice across well child care. In this particular case, this child received treatment and care in a timely manner with appropriate follow up due to an unexpected abnormal blood pressure recording.

Biography

Sarah Kyne is a Paediatric Senior House Officer. She is currently on the second year of her training scheme in Ireland in Paediatrics. She graduated from Trinity College Dublin in June 2016 and completed her first year of intern training in St James's Hospital in Dublin. After this she applied straight to the Paediatric Training scheme and carried out her first year on this scheme on General Paediatrics in Galway. She is currently working at the National Maternity Hospital, Holles Street, Dublin on Neonatology. Dr Kyne is in the process of completing her Paediatric Membership exams.

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