Ureteropelvic junction obstruction

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Ureteropelvic junction (UPJ) obstruction, also often called pelviureteric junction (PUJ) obstruction, describes an incom plete and intermittent reduction in urine flow from the kidney to the proximal ureter and occurs in 1 in 1000 live births with a male and left-sided pr edominance. It is the most common cause of serious antenatal hydronephrosis. Commonly a disruption of circular muscle or collagen fibres in the proximal ureter results in an intrinsic narrowing near the renal pelvis. Extrinsic compression is less common and results from an aberrant renal vessel compressing the ureteropelvic junction. Most cases are diagnosed in the postnatal evaluation of an antenatally detected hydronephrosis, although some newborns present with an abdominal or flank mass and a history of urinary tract infection or haematuria. Older children may present with severe intermittent flank or abdominal pain associated with nausea and vomiting, known as Dietl’s crisis. MAG-3 imaging confirms the diagnosis, and knowing the di ff erential renal function helps to decide between surgical and non-surgical management (Figures 20.4 and 20.5). In symptomatic children, a pyeloplasty is indicated. In many countries, this is now commonly performed laparo scopically , with some using robotic assistance. A pyeloplasty in volves transection at the obstruction and the fashioning of a Józef Dietl , 1804–1878, Austrian–Polish ph ysician and Mayor of Kraków , reformed medicine by showing through experiments that bloodletting was not only useless but dangerous. placed. Follow-up with serial ultrasounds and MAG-3 imaging is required.

Figure 20.4 Mercaptoacetyltriglycine (MAG-3) renal scan showing poor drainage of a hydronephrotic left kidney due to partial uretero pelvic junction obstruction. Note that nuclear scans are shown as if looking from behind the patient.

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