Benign renal tumours

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Incidental detection of renal lesions has increased owing to - the widespread use of abdominal imaging. The lesions may be cystic or solid. Solid renal tumours should be considered - malignant unless proven otherwise. Renal oncocytoma - This derives its name from its cellular appearance on histo - pathology , where uniformly highly granular eosinophilic cytoplasm owing to abundant mitochondria (oncocyte) is seen. It accounts for around 5% of renal tumours. It appears as an enhancing mass on cross-sectional imaging and is di ffi cult to di ff erentiate from RCC. Both RCC and oncocytoma pr esent at around the seventh decade and have a male preponderance. It coexists with RCC in approximately 10% of cases. The characteristic radiological features on axial imaging are the presence of central stellate scarring and a spoke wheel appearance in the angiographic phase. Nephron-sparing sur - - gery , such as partial nephrectomy , should be the preferred option, whenever feasible. The diagnosis is usually confirmed after removal. Histologically , it can be confused with chromo - phobe RCC, particularly the eosinophilic v ariant. They may be di ff erentiated by the use of immunohistochemistry staining, where chromophobe RCC stains positive for cytokeratin-7. Renal angiomyolipoma - Angiomyolipoma comprises a composite mix of fat tissue - with dysmorphic blood vessels and smooth muscle. It is most often detected incidentally and has a female preponderance. Angiomyolipoma may be associated with syndromes such as the tuberous sclerosis complex or it may be sporadic in nature. Spontaneous acute haemorrhage into the mass can present with loin pain. Pregnancy is a potential risk factor for bleeding. US shows a bright echogenic mass lesion on account of the high fat content. CT scan shows an intralesional fat density of –15 to –20 Hounsfield units (HU) within the mass, which sis. Management depends upon the size of the tumour, the risk of haemorrhage and the symptoms. Tumours <4 /uni00A0 cm can be followed up. Nephron-sparing sur gery such as partial nephrectomy is the preferred option. Angioembolisation is the preferred modality of choice in the setting of acute haemor rhage. Drugs that inhibit this pathway (mTOR pathway), such as everolimus and sirolimus, have recently been shown to have excellent response rates in this subg roup of patients with the tuberous sclerosis complex who have activation of the tumor igenic mTOR pathway . Juxtaglomerular cell tumour These are extremely rare tumours that occur at a young age, often presenting with hypertension and hypokalaemia with high renin levels. These tumours are unique in that hyperten sion resolves with surgery .

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