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## ANSWERS:

### 1. 'BEAR PAW' SIGN

### 2. XANTHO-GRANULOMATOUS PYELONEPHRITIS

Xanthogranulomatous pyelonephritis (XGP), first described by Sclagenhauser in 1916 is a chronic destructive granulomatous renal parenchymal pathology and a rare sequelae of recurrent urinary tract infections or obstruction.<sup>1</sup> It is more common in females and can manifest with symptoms ranging from vague abdominal discomfort and weight loss, to symptoms of urinary tract infections (fever, renal tenderness and lower urinary tract symptoms), severe sepsis and complications such as gross haematuria, psoas abscess, perinephric abscess and fistulae formation. It may mimic conditions like perinephric abscess, tuberculosis and renal cell carcinoma.

Computed tomography (CT) imaging is the modality of choice and the 'Bear paw' sign is pathognomonic of XGP, resembling the paw of a bear and is diagnostic of this condition.<sup>1, 2</sup> The Bear paw signs are hypoattenuating dilated calyces due to cellular infiltration of lipid-laden macrophages and not due to fluid collections. Other changes seen on imaging include hydronephrosis (90.9%), nephrolithiasis (72.7%), pyonephrosis (45.5%), intra-parenchymatous collection (45.5%), cortical renal atrophy (45.5%), abscess (36.4%) and perinephric fat accumulation (18.2%).<sup>3</sup> XGP can be progressive and manifest through several stages which are classified into three categories.<sup>1</sup> In the extreme of Stage 3 disease, fistulae such as renocutaneous, reno-bronchial and reno-enteric (particularly reno-colic) have been reported, of which reno-cutaneous and reno-bronchial are the most common.<sup>1</sup>

Management depends on the stage of disease. Stage 1 (Early stage where inflammatory changes are localised to the renal parenchyma) and Stage 2 (Involvement of the perinephric fat but not beyond) can be treated with a prolonged antimicrobial therapy. For stage 3 disease (extension into the perinephric fat affecting the surrounding structures of organs including fistula formation), in addition to antimicrobial therapy, surgery may be indicated. Prognosis depends on the stage of disease and early diagnosis is important.

## CONFLICT OF INTEREST

The author(s) declared no conflict of interest in this work.

## CONSENT

Consent has been obtained from patient and hospital authority to publish this article.

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