Xanthogranulomatous Pyelonephritis – A rare case of Fistula between Colon and Kidney

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SUMMARY: We report the case of a 63 year old lady with xanthogranulomatous pyelonephritis. The treatment of choice is nephrectomy. At operation a fistula between large bowel and kidney was found requiring bowel resection. This is a rare complication of xanthogranulomatous pyelonephritis.

Introduction
Xanthogranulomatous pyelonephritis is a rare and unusual chronic inflammatory condition resulting in a destructive pyelonephritis (1). Predisposing factors include infection, calculi and destructive uropathy, and accurate pre-operative diagnosis is often difficult.

Case Report
A 63 year old lady presented to the urological outpatient with a six month history of weight loss, general malaise and poor appetite. Examination revealed a mass in the right loin. Blood tests showed a raised white cell count [15.4 x 10^9/L] and raised ESR [122mm].

An ultrasound scan showed a hydronephrotic right kidney with multiple calculi. A further DMSA scan showed a nonfunctioning right kidney. A provisional diagnosis of xanthogranulomatous pyelonephritis was made and a right nephrectomy was performed. At operation an enlarged kidney was found which was adherent to the liver and ascending colon. The kidney was removed with difficulty and a fistula was found between the ascending colon and right kidney. A limited resection of the ascending colon with end to end anastomosis was performed.

The patient made an uneventful postoperative recovery.

Histological examination of the kidney confirmed xanthogranulomatous pyelonephritis (Fig 1).

Discussion
Xanthogranulomatous pyelonephritis is a chronic and rare form of pyelonephritis, more commonly affecting women in their 5th to 7th decades. Infection, calculi and obstructive uropathy may predispose to the condition (2). Classical symptoms include flank pain, pyrexia and weight loss. Examination often reveals a renal mass (3).

Fig 1. Microscopic section showing foam cells and necrotic tissue lining dilated calyces and pelvis, indicating xanthogranulomatous pyelonephritis.

The coexistence of xanthogranulomatous pyelonephritis and renal cell carcinoma is extremely rare but has been reported.

Histologically the condition is characterized by destruction and replacement of renal parenchyma by lipid-laden macrophages (4). Typically the disease is diffuse but may also be focal, and extrarenal complications have been previously reported (5) but fistulae between the large bowel and kidney are extremely rare.

The histological specimen in this case confirmed xanthogranulomatous pyelonephritis and sections from the fistula showed xanthogranulomatous tissue extending through the fistular tract. There was no evidence of malignancy.

Xanthogranulomatous pyelonephritis complicated by a renal-enteric fistula is rare and has not been previously reported. This can be treated by nephrectomy and resection with minimum morbidity.

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