Xanthogranulomatous pyelonephritis

A. K. DUTT
M.B.B.S. (Calcutta)
Specialist in Pathology, Pathology Unit, State Hospital, Kota Bharu, Malaysia

E. S. S. JOSEPH
M.B.B.S., F.R.C.S.(Edin.)
Consultant Surgeon, District Hospital, Kuala Lipis, Malaysia

UNGKU OMAR-AHMAD
M.B.B.S. (Malaya), Ph.D.(Lond.), D.Path.(Eng.), M.C.Path.(Lond.), M.Biol.(Lond.), F.C.A.P.
Director, Institute for Medical Research, Kuala Lumpur, Malaysia

M. RAMANATHAN
M.B.B.S.
Medical Officer, District Hospital, Kuala Lipis, Malaysia

M. K. KUTTY
M.B.B.S.(Madras), M.D.(Lucknow)
Specialist in Pathology, Institute for Medical Research, Kuala Lumpur, Malaysia

ACCORDING to Rios-Dalenz & Peacock (1966), sixty-seven cases of xanthogranulomatous pyelonephritis have been documented in the literature.

Case report

A Chinese male, aged 22 years, was admitted to the District Hospital, Kaula Lipis, on 5 July 1968, for the evaluation of a discharging sinus in the right renal angle of 8 months' duration. The patient had no urinary symptoms. Sinography was inconclusive. Intravenous pyelography revealed a non-functioning right kidney associated with hydronephrosis due to stone in the ureter. The left kidney and ureter were normal. The blood pressure and blood biochemistry were normal, and urine analysis and culture were negative. Culture of purulent material from the sinus tract yielded the growth of *Staphylococcus aureus* and *Escherichia coli* sensitive to tetracycline. Repeated biopsy of the sinus tissue showed non-specific granulation tissue. On 30 July 1968, right total nephrectomy was performed. The patient made an uneventful recovery. On macroscopic examination, the kidney was found to be slightly enlarged. The capsule was thickened, and adherent to the surface which was coarsely granular. There was moderate hydronephrotic change with loss of cortico-medullary outline. Multiple yellow nodules were seen on the cut surface (Fig. 1). Histological appearance of the renal lesion was diagnostic of xanthogranulomatous pyelonephritis (Figs. 2 and 3). The patient was last seen on 3 September 1968. Apart from the persistent sinus in the right renal angle, physical examination was negative.

Discussion

Schlagenhaufer (1916), Putscher (1934) and Barrie (1949), as quoted by Parker (1966), were credited with the earlier descriptions of xanthogranulomatous pyelonephritis. Most of the cases described in the

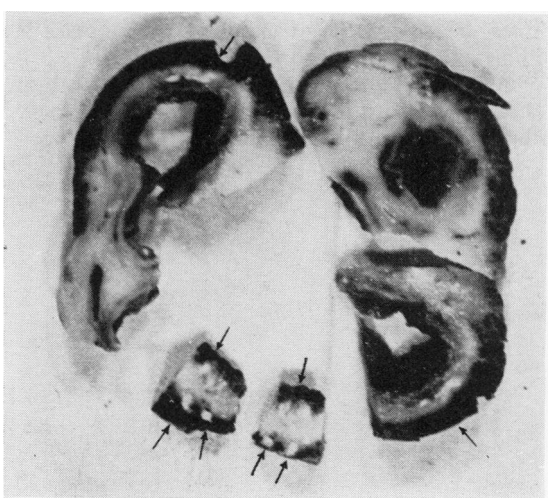

FIG. 1. Cut surface of the kidney showing hydronephrosis, loss of cortico-medullary outline and multiple yellow nodules as indicated by arrows.

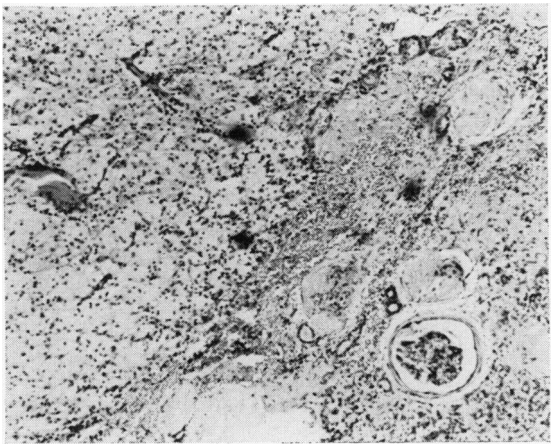

FIG. 2. Chronic pyelonephritis with sheet-like infiltration of foam cells. H & E, ×120.

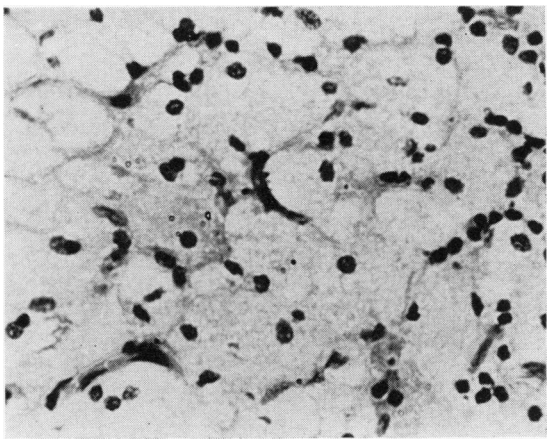

FIG. 3. Aggregate of foam cells. H & E, × 800.

literature were associated with unilateral hydronephrosis due to stone and recurrent infection caused by *Staph. aureus* or *Bacillus proteus* (Ghosh, 1955; Saeed & Find, 1963). The etiology of xanthogranulomatous change in pyelonephritis is obscure. It is postulated that repeated infection causes cellular necrosis which result in the liberation of lipid material. Subsequently the lipids are phagocytosed by monocytes and histiocytes which infiltrate as foam cells in the renal parenchyma. The infiltration of foam cells is focal or diffuse replacing renal parenchyma and sometimes perirenal tissue. Occasionally, chronic micro-abscesses or multinucleated giant cells are seen. This lesion may be confused, both clinically and pathologically, with carcinoma of kidney. The prognosis is excellent. The disease is completely cured by nephrectomy.

Our case presented with the unusual symptom of a discharging sinus in the renal angle, while urinary symptoms were surprisingly absent.

Addendum

At a follow-up examination on 18 January 1969, the sinus was found to to be completely healed.

Acknowledgments

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