

Lymph node tuberculosis presenting as chyluria

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Wilson, R. S. E. and White, R. J. (1976). *Thorax*, 31, 617–620. Lymph node tuberculosis presenting as chyluria. Chyluria is a rare manifestation of tuberculosis. A patient in whom it was a presenting symptom is described.

CASE REPORT

A previously fit 25-year-old Indian housewife presented in August 1975 with a 10-day history of passing persistently 'milky' urine. Apart from an episode of urinary retention at the onset, there were no other symptoms. The patient had arrived in England from Calcutta in 1971 and at that time was said to have a normal chest radiograph. There was no family history of tuberculosis and no evidence of recent contact. She had not received BCG vaccination.

Examination revealed a healthy looking young woman with small lymph nodes medially in each supraclavicular fossa. There were no other abnormal physical signs and in particular no abnormality was detected in the abdomen.

Investigations showed a haemoglobin of 13.3 g/dl, a white cell count of 9300/mm³ (19% lymphocytes) and a raised plasma viscosity of 1.87 Cp (normal=1.5–1.72). The urine was milky white (Fig. 1) containing 400 lymphocytes/mm³, lipid, albumin, and a trace of blood. Lipid globules were identified using phase contrast microscopy. The urine was negative for acid-fast bacilli on direct smear and subsequently on culture. A tuberculin test (1 unit) gave an indurated area of 3 cm at 48 hours. The chest radiograph (Fig. 2) showed a lobulated superior mediastinal mass, which was thought to consist of enlarged lymph nodes. An intravenous pyelogram showed normal sized kidneys and calyces, but there was lateral deviation of the lower third of the right ureter (Fig. 3). Lymphography was performed but, because of technical problems, only the left side was injected and the para-aortic nodes on this side only were filled. These were not enlarged but showed minor abnormalities in their architecture. Marked stasis in the lymph flow was noted, and

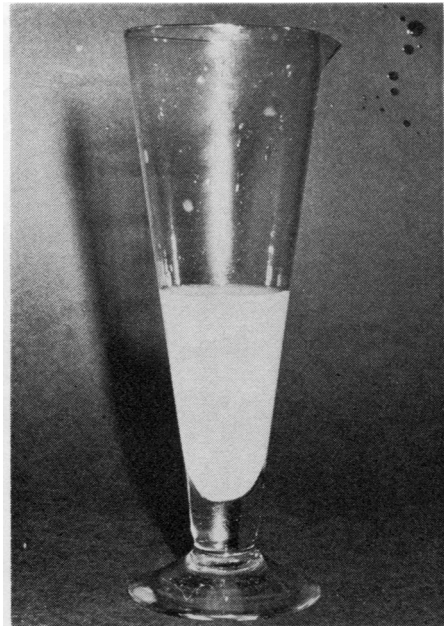


FIG. 1. Urine specimen showing chyluria.

abnormal lymphatic vessels were seen in the area of the right kidney. No contrast medium appeared in the kidney or ureter but it was thought likely that these abnormal vessels were communicating with the urinary tract (Fig. 4a, b).

A right supraclavicular lymph node was excised and showed a central core of caseation surrounded by a thin rim of fibrous tissue; Langhans giant cells and epithelioid cells were seen. Bronchoscopy showed small polypoid excrescences on the medial wall of both main bronchi. A biopsy speci-

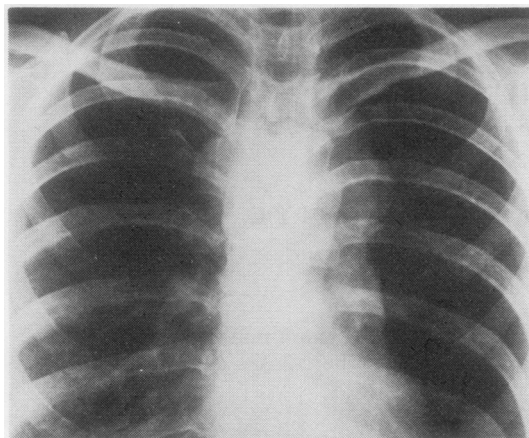


FIG. 2. Chest radiograph showing superior mediastinal mass.

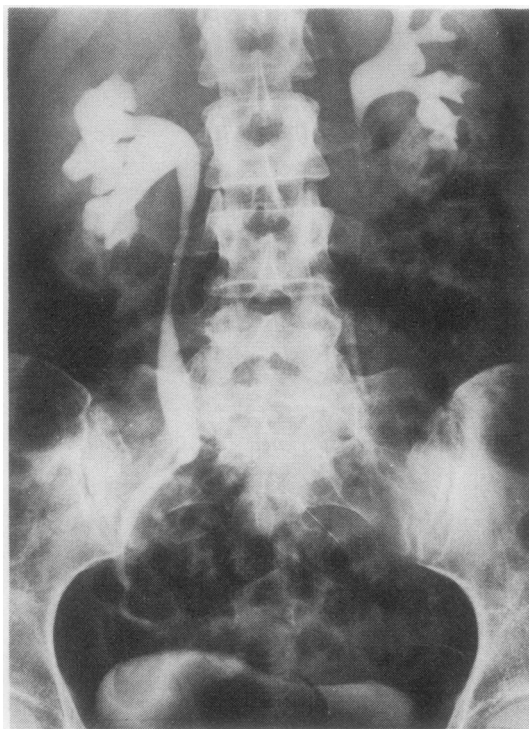


FIG. 3. IVP showing lateral deviation of lower part of right ureter.

men was taken and this contained caseating granulomata with epithelioid cells. Acid-fast bacilli were neither seen nor cultured from the histological specimens.

Treatment with streptomycin, 0.75 g, rifampicin, 450 mg, and isoniazid, 300 mg, daily, was started one week before the biopsy specimens were taken. The chyluria gradually subsided and after 10 days' treatment the urine was normal in colour and contained no protein or white cells. Serial chest radiographs showed gradual resolution of the mediastinal lymph nodes.

The family contacts were examined and all were tuberculin negative.

DISCUSSION

Chyluria is a rare condition and is rarely mentioned in standard medical texts. The commonest cause is undoubtedly filariasis (Yamauchi, 1945; Johnston, 1955; Kinmonth, 1972). Less frequent causes include trauma to the thoracic duct (Lazarus and Marks, 1946), congenital thoracic duct abnormalities (Servelle *et al.*, 1963), and primary lymphoedema (Kinmonth, 1972). Although malignant and tuberculous obstructions are accepted causes (Johnston, 1955), they are not well described in the literature. Kutzmann (1925) states that Port, in 1906, reported a patient with chyluria who *post mortem* was found to have large caseating mediastinal nodes, and that in 1923 Le Dantrec reported a case in which chyluria was associated with tuberculous peritonitis. The chyle is thought to reach the urine via a lymphatic-urinary fistula. Blockage to the lymphatics results in the formation of lymphatic varices which may in turn rupture and discharge lymph into the renal calyces, ureters, bladder or even urethra (Johnston, 1955).

The patient described here came from an area where filariasis is endemic but gave no history of the disease. The lymph node histology, positive tuberculin test, and demonstration of lymphatic stasis, coupled with the dramatic response to therapy, leaves little doubt that the chyluria was related to lymph node tuberculosis.

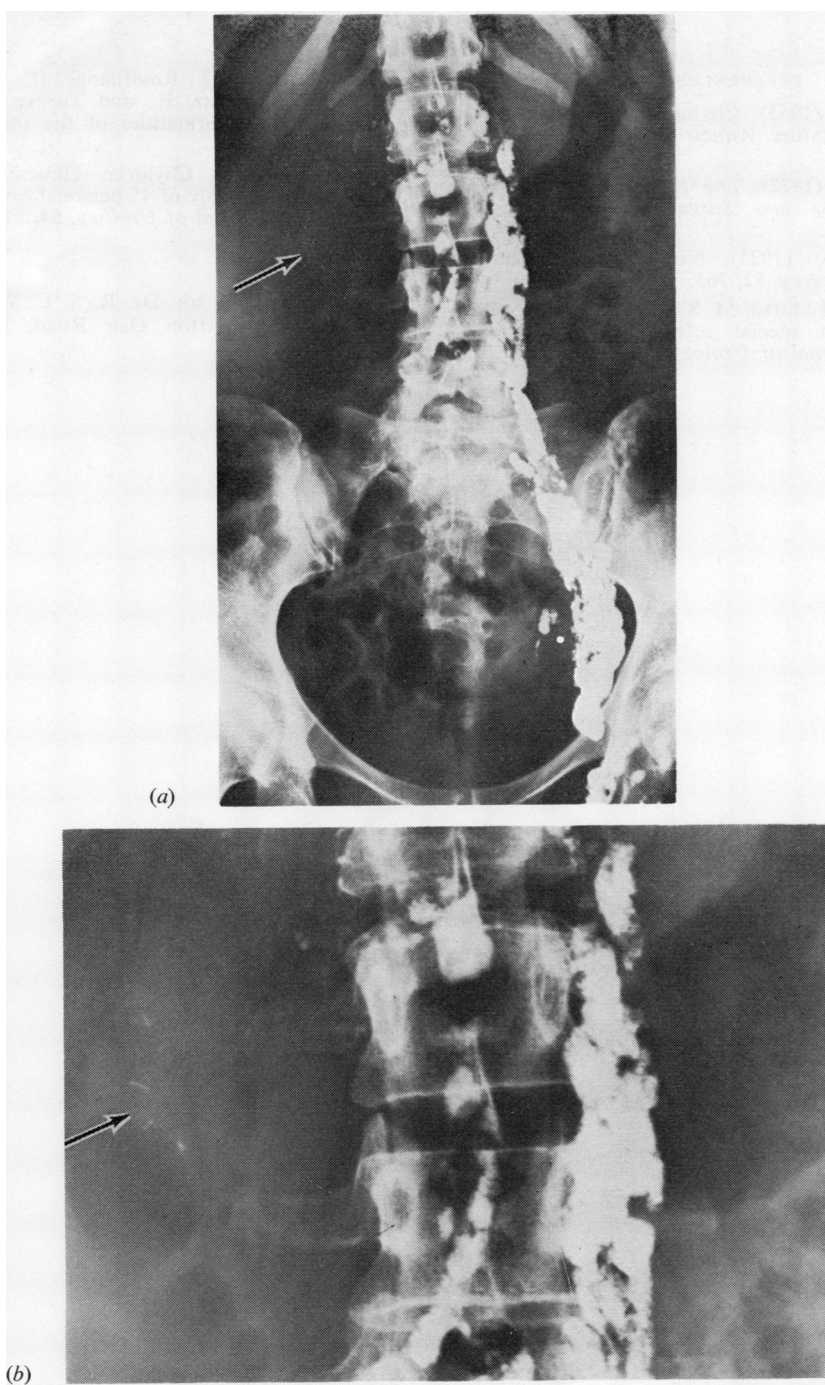


FIG. 4(a) The arrow shows three small lymphatico-renal channels. There is no dye in the lymphatics above the level of L1—indicating obstruction. No lipiodol appeared in the thoracic duct or mediastinal nodes. Taken at 24 hours post lymphogram. **(b)** The arrow shows two linear lymphatic vessels over the right kidney—thought to be due to lymphatico-renal channels. Taken at 24 hours after lymphogram.

REFERENCES

- Johnston, D. W. (1955). Chyluria: case report and review of literature. *Annals of Internal Medicine*, **42**, 931.
- Kinmonth, J. B. (1972). *The Lymphatics: Diseases, Lymphography and Surgery*. E. A. Arnold, London.
- Kutzmann, A. A. (1925). Non-parasitic chyluria. *Annals of Surgery*, **82**, 765.
- Lazarus, J. A. and Marks, M. S. (1946). Non-parasitic chyluria with special reference to traumatic chyluria. *Journal of Urology*, **56**, 246.
- Servelle, M., Turiaf, J., Rouffilange, H., Scherer, G., Perrot, H., Frentz, F., and Turpyn, H. (1963). Chyluria in abnormalities of the thoracic duct. *Surgery*, **54**, 536.
- Yamauchi, S. (1945). Chyluria: clinical, laboratory and statistical study of 45 personal cases observed in Hawaii. *Journal of Urology*, **54**, 318.
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