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Lymphogranuloma Venereum with Hepatic Involvement

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Whether or not the liver may be affected in patients suffering from lymphogranuloma venereum (LGV) is a subject of controversy, and very few communications have been published on this topic (1, 2, 3, 5, 7). The purpose of the present paper is to further elucidate this subject.

CASE REPORT

A 36-year-old unmarried Norwegian seaman attended the clinic in September 1975 with a moderately tender enlargement in the right groin.

In 1959 he had chancroid, and since 1962 gonorrhoea 8 times and, in the last 2 months, a steadily growing lump in the right groin. He had sailed in tropical and subtropical waters for several years. Last sexual contact was in Thailand 2 months prior to admittance.

The patient presented an enlarged lymph node in the right groin, measuring 5 cm in diameter, moderately tender, fluctuating and adherent to the skin and underlying tissues. A small crust was seen on the shaft of the penis. There was no fever. The findings of the general physical examination were otherwise normal.

Laboratory investigations. Hb 14.1 g/100 ml, white blood count 15800, with a moderate shift to the left, E.S.R. 98 mm/hour, serum proteins 8.3 g/100 ml (albumin 3.9 g/100 ml, globulin 4.4 g/100 ml), gamma globulin 1.82 g/100 ml (normal 0.6–1.5 g/100 ml), otherwise normal serum electrophoresis.

Liver investigations. Total bilirubin 0.6 mg/100 ml, alkaline phosphatase 1118 U/l (normal <270 U/l), gamma-glutamyl transpeptidase 174 U/l (normal <50 U/l), SGPT 405 U/l (normal <40 U/l). OCT (4 weeks later) 173 U/l (normal <45 U/l), sulphobromophthalein retention (4 weeks later) 3.0% (normal <5%). Liver scan showed hepatomegaly with no filling defects. Needle biopsy of the liver (5 weeks later). The biopsy (P. 13776/75) specimen showed some capsular, portal and septal fibrosis with slight infiltration of lymphocytes, histiocytes and some eosinophilic granulocytes. The radiary structure of the liver cords was preserved, and the liver cells contained some bile pigment. Focal hyperplasia of Kupffer cells could be seen (E. Blück, The Gade Institute) (Fig. 1).

Serological tests. Immune electrophoresis (4 weeks later): IgA 6.1 mg/100 ml (normal 0.5–3.3 mg/100 ml), IgG 14.5 mg/100 ml (normal 7–18 mg/100 ml), IgM 2.6 mg/100 ml (normal 0.3–2.5 mg/100 ml). The complement fixation test for lymphogranuloma venereum (LGVCF) was positive at a serum dilution 1:512 on admission and showed a fourfold rise in the titre during the observation period, 1:1024 (1 week later) and 1:2048 (16 weeks later). The LGV specific immunofluorescence test was not available.

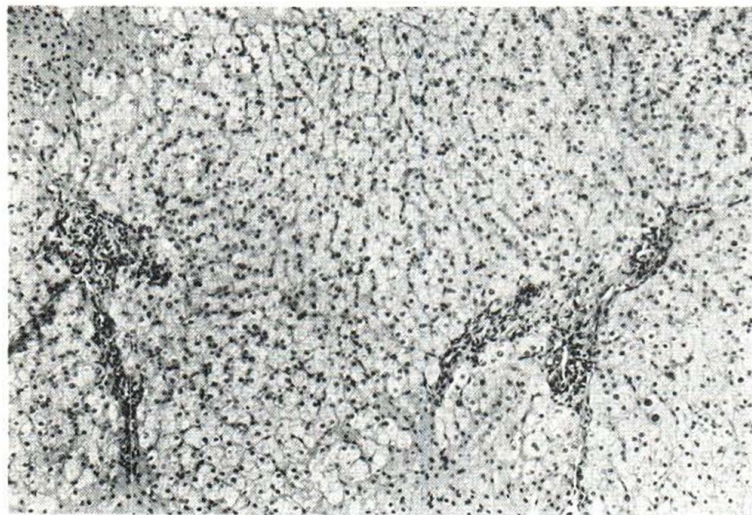


Fig. 1. Periportal and septal cell infiltrates with slight fibrosis. $\times 110$.

Table I. *Result of liver function tests*

Tests	Time after admission				
	2 days	2 weeks	4 weeks	6 weeks	12 weeks
Total bilirubin (mg/100 ml)	0.6	0.3	0.3	0.3	0.3
Alkaline phosphatase (U/l)	1 118	1 540	729	360	294
Gamma-glutamyl transpeptidase (U/l)	174	354	175	84	54
SGPT (U/l)	405	119	41	30	21
OCT (U/l)	—	—	173	93	49
Sulphobromophthalein (% retention)	—	—	3.0	—	—

Serological tests for herpes simplex virus: no significant rise in the titre. Serological tests for syphilis were negative. Paul-Bunell test: negative. Australia antigen not found.

Other investigations. The Frei test could not be performed as the antigen was not available. Sterile pus was obtained by aspiration of the inguinal lymph node, and attempted growth of the LGV agent in the yolk sacs of chick embryos was not successful. Investigations for tuberculosis: negative. X-ray examinations did not reveal any pathological process, either in the skeleton or in the extrahepatic biliary system. Needle biopsy of the bubo: necrosis and acute inflammation. Urine: normal.

Treatment. The patient was treated with oral doxycycline (Vibramycin®, Pfizer) 200 mg daily for 6 weeks and then 100 mg daily for an additional 6 weeks. Small amounts (3–4 ml) of sterile pus were aspirated several times from the inguinal bubo.

The inguinal swelling resolved slowly over several weeks. As appears in Table I the liver function tests showed gradual normalization. After 12 weeks, all tests showed normal values, except for a persisting high titre of the LGVCFT.

DISCUSSION

To date, the LGVCFT is regarded as the most sensitive and reliable routine test for the diagnosis of LGV (3, 6). Accordingly, the diagnosis would seem to be verified in this patient, taking into account the high and slightly rising titre, together with the clinical picture.

Barth & Alexenco (1) were the first (in 1941) to describe a case of LGV with acute hepatitis. They found inclusion bodies in a liver puncture specimen. After the intracerebral inoculation of this into white mice, all of the animals died of a "typical paralytic disease". Stineman et al. (5) studied hepatic function tests in 14 patients with this disease and found that the thymol turbidity and cephalin flocculation

tests were the only ones showing significantly abnormal results. This was ascribed to the hyperglobulinemic state usually seen in LGV (4, 8) and not to actual liver disease. Schachter et al. (3) described hepatitis as a possible complication in a case of acute LGV. Wagoner et al. (7) reported two cases of LGV with granulomas in the liver. On the other hand, Jørgensen (2) found no granulomas in eight autopsied cases of LGV.

In the present case, the hepatic function tests revealed liver impairment, chiefly of an occlusive pattern, but also indicative of parenchymatous involvement. Although needle biopsy of the liver was unfortunately not performed until the liver function tests had improved (5 weeks after treatment was started), significant signs of hepatic affection were nevertheless present. Further examination did not reveal any evidence of bone changes which could explain the high levels of alkaline phosphatases.

The normalization of the liver function tests following treatment indicates that the liver impairment demonstrated in this patient is related to the concomitant LGV infection. The patient made a full clinical recovery during treatment with doxycycline for 12 weeks. It can be assumed that this treatment is adequate since, except for the LGVCFT, all the tests including the immunoglobulins were normalized after 12 weeks.

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