Twelve patients, one of whom was homosexual, attended with a contact note indicating that their partner had been treated for gonorrhoea; three were advised to attend by their contacts; four came for a check-up (one had had a contact who was being treated for salpingitis); three had noticed genital warts; and two complained of itchiness (one with scabies, and one with pediculosis pubis). No patient had had antibiotic treatment in the preceding three months. On examination six patients (three of those with a contact note, one who had come for a check-up, one who had been sent by a contact, and one who had genital warts) were found to have a urethral discharge of which they had been unaware. Urethral samples were obtained from all the patients by sterilized platinum loops for Gram-stained slides and microscopical examination, and a further sample was inoculated on to a Columbia blood agar plate without antibiotics. Five patients did not return for follow-up examination and may have remained infectious.

Discussion

To minimize diagnostic errors in patients who may have asymptomatic urethral gonorrhoea urethral scrapes for microscopical examination and culture should be taken twice, at the first visit and a fortnight later. The patient should be advised to retain urine for at least two hours before each attendance.

A recent study⁵ of 505 military personnel in the United States who were undergoing routine medical examination did not show any evidence of gonorrhoea on culture. Most asymptomatic disease is found in high-risk groups—that is, male sexual contacts of known patients and male attenders at venereal disease clinics. A larger survey is proposed to estimate more accurately the extent of the problem in the United Kingdom and to indicate methods by which this hidden reservoir of infection can be reduced. Meanwhile general practitioners and other doctors should not assume that symptomless men are necessarily free from sexually transmitted disease, and male contacts of women with gonorrhoea should be examined even if they insist they have no symptoms.

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¹ Bittner, J. B., and Horne, G. O., *British Journal of Venereal Diseases*, 1955, 31, 155.

² Pariser, H., *Medical Clinics of North America*, 1972, 5, 1127.

³ Holmes, K. K., *Annals of Internal Medicine*, 1971, 75, 470.

⁴ Hunter Handfield, H., et al., *New England Journal of Medicine*, 1974, 290, 117.

⁵ Thatcher, R. W., et al., *Journal of The American Medical Association*, 1969, 210, 315.

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Adult Toxocaral Infection with Focal Retinal Lesion

The second-stage larva of *Toxocara canis* may produce retinal granulomata,¹ endophthalmitis,² or optic neuritis.³ Such lesions occur mostly in children, and the habit of geophagy in infancy may be a method by which the ova, excreted in the faeces of infested dogs, enter the human alimentary tract. Fluorescent antibody tests for toxocarasis in healthy blood donors produced positive reactions in 4.5% of the 18-25-year-olds and 7.1% of the 30-40-year-olds.⁴

Case Report

On 27 July 1974 a 50-year-old man complained of malaise, anorexia, and night sweats of sudden onset but general examination three days later showed no abnormality. On 6 August an eosinophilia of over $2 \times 10^9/l$ and a plasma viscosity of 2.0 cP were reported. A week later the patient noted blurred vision, distortion of images, and micropsia in his right eye associated with ocular pain radiating to the scalp and face on the same side. On admission to hospital on 16 August his systemic symptoms had resolved and

general examination again showed no abnormality. Investigations excluded toxoplasmosis, autoimmune disease, Q fever, liver disease, spirochaetal infection, undulant fever, psittacosis, Coxsackie B virus, and tuberculosis. The eosinophil count had fallen to $0.7 \times 10^9/l$ and the plasma viscosity to 1.7 cP. Since the ocular symptoms persisted an ophthalmic opinion was obtained. Visual acuities were 6/12 right and 6/6 left, and in the right fundus a small discrete disciform lesion was noted above and temporal to the macula containing a thin linear opacity with its axis oriented vertically.

On questioning, the patient stated that he had acquired a puppy about five weeks before the onset of his illness. The response to a toxocaral fluorescent antibody test proved positive. The retinal lesion was treated with light coagulation, and from the next day the patient had no further pain. Six months later the visual acuity was 6/12, the ocular symptoms and retinal oedema had resolved, and no linear opacity could be discerned.

Just before treatment retinal fluorescein studies showed a pigment epithelial detachment and the linear opacity had rotated to the horizontal (see fig.). Repeat fluorescein angiography two months later showed only the typical pigmentary clumping and atrophy resulting from light coagulation.

Residual-phase angiogram showing linear opacity and pooling of dye beneath pigment epithelium.

Discussion

The presence of a raised retinal lesion containing a linear opacity that changed its position associated with an eosinophilia strongly suggested a nematode infection. The recent acquisition of a puppy and the presence of toxocaral antibodies made the diagnosis of toxocarasis highly probable.

We are unaware of other reports of ocular toxocaral infection in patients of this age but there appear to be ample opportunities for ingesting ova by persons of any age handling infested dogs or contaminated soil.⁵

A further six patients aged 20-44 years observed by us had similar presenting symptoms and developed exudative disciform lesions with retinal fibrosis. All gave positive reactions to fluorescent antibody tests for toxocara. Adult ocular infection may therefore be more common than was previously thought. Diethylcarbamazine treatment was not considered because of evidence that the dead larva promotes a more vigorous cellular response. Immunological isolation of the lesion and surrounding tissues was therefore attempted by applying light coagulation. This appears to have been effective in a case detected before a fibrotic reaction had occurred.

¹ Ashton, N., *British Medical Journal*, 1960, 44, 129.

² Duguid, I. M., *British Journal of Ophthalmology*, 1961, 45, 705.

³ Bird, A., *American Journal of Ophthalmology*, 1970, 69, 74.

⁴ Woodruff, A. W., *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 1973, 67, 755.

⁵ Borg, O. A., and Woodruff, A. W., *British Medical Journal*, 1973, 4, 470.

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