

ACUTE ANTERIOR UVEITIS IN MEN*† ASSOCIATION WITH CHRONIC PROSTATITIS

BY

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WHEREAS some forms of anterior uveitis are caused by direct invasion by organisms, like the tubercle bacillus, possessing an almost ubiquitous capacity for exciting chronic granulomata throughout the body, no such simple mechanisms operate in the majority of patients with the acute (non-granulomatous) variety of anterior uveitis, for modern investigations have repeatedly failed to isolate organisms from the iris or aqueous in such patients (Woods, 1947; von Sallmann, Locke, and Locke, 1951). On the other hand, the clear-cut association of acute anterior uveitis with similarly obscure recurring inflammations elsewhere, *e.g.* the sacroiliac joints, together with the experimental "model" production of anterior uveitis, spinal arthritis, urethritis, and colitis after the injection of Freund's adjuvant‡ (Pearson, Waksman, and Sharp, 1961; Waksman and Bullington, 1960), naturally leads to the attractive if not compelling hypothesis that an endogenous hypersensitivity of the delayed bacterial type may be the basis of such inflammation (Woods, 1947). It is further speculated that immune competent cells are stimulated by organisms (or their product) as yet unidentified, to elaborate antibody which is capable of attacking unknown molecular components shared by such apparently diverse tissues (Hogan, 1964) as the anterior uvea and the sacroiliac joints.

It is widely accepted that acute anterior uveitis in men is associated with ankylosing spondylitis in about a third of cases and with Reiter's disease in a further 20 per cent. (Stanworth and Sharp, 1956). There is considerable overlap between Reiter's disease and ankylosing spondylitis (Oates, 1959), and Stanworth and Sharp (1956) noted that half of their sixteen patients with Reiter's disease also had radiological evidence of sacroiliac disease sometimes indistinguishable from that seen in ankylosing spondylitis. The two conditions are, nevertheless, generally presumed to be separate disorders. A much rarer form of acute anterior uveitis may be associated with ulcerative colitis, particularly when arthritis is present (Wright, Lumsden, Luntz, Sevel, and Truelove, 1965). It is of considerable interest that the sacroiliac joints are often involved in colitic arthritis. An insidious and chronic uveitis is seen in about 7 per cent. of cases of Still's disease. It is again noteworthy that radiological evidence of often asymptomatic sacroiliac changes is found in nearly a quarter of these patients, a finding which may possibly be related to ankylosing spondylitis both in the patients and their families (Ansell, 1965). Rheumatoid

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‡ An oily extract of tubercle bacilli; the most active component of which, Wax D Canetti, has electron microscopical appearance of coarse filaments similar if not identical to those seen on surface of tubercle bacilli.

arthritis of adults is not related to acute uveitis *per se*; anterior uveitis may occur in this latter disease in association with scleritis, *i.e.* a "sclero-uveitis" (Stanworth and Sharp, 1956; Kimura, Hogan, O'Connor, and Epstein, 1967).

Non-specific urethritis, a genito-urinary infection of unknown aetiology invariably accompanied by chronic prostatitis, is frequently the presenting feature of Reiter's disease. Moreover, it seems reasonably certain that chronic prostatitis is a frequent accompaniment of ankylosing spondylitis (Romanus, 1953; Mason, Murray, Oates, and Young, 1958) occurring in 70 per cent. of 100 patients in Romanus's study (Romanus, 1953). Catterall and Perkins (1961) reported that 80 per cent. of 133 men with acute anterior uveitis had non-specific prostatitis, compared with an incidence of 30 and 40 per cent. in normal and posterior uveitis control groups respectively.

The diagnosis of prostatitis in the latter study was based on customary pus cell estimations in fluid obtained by prostatic massage; cell counts were made in 1/12 microscope objective fields, an arbitrary upper limit of normality being taken as 10 cells per field. A refinement in the diagnosis of prostatitis has been the introduction of the counting chamber, although even with this method clumping of white cells and the lack of standard "normal" controls have been a drawback. Morton (1968) has recently advocated the counting-chamber measurement of pus cells in total semen ejaculates. He pointed out that the volume of prostatic fluid is independent of the total semen volume even when samples are produced at short intervals, and that pus cell clumping, which confuses the count in the prostatic massage technique, is not a handicap with this method. Morton used five million pus cells per ml. as the upper limit of normality, a figure arrived at by study of various control groups, including patients with a past history of genito-urinary infections.

In the light of this information, it was naturally of interest to employ Morton's method to re-evaluate the important association between chronic prostatitis and acute anterior uveitis which has not been the subject of further investigation.

Method

Semen specimens were obtained from two groups:

(1) 35 young adult males, presenting for the first time with acute (non-granulomatous) anterior uveitis, were examined in detail by one of us (R.S.M.) for genito-urinary infection and semen analysis. No patient with a past history of uveitis, urethritis, or Reiter's disease was included in this group. Radiological examination of the lumbar spine and sacroiliac joints, together with the usual tests and examinations for anterior uveitis, was undertaken in all patients.

(2) 25 men of similar age and social background, with no history or evidence of ocular disease.

Semen specimens, obtained after 3 to 5 days sexual abstinence, were all examined within 2 hours of production. Pus cells were determined in the Thoma-Zeiss counting chamber. Dilution of semen with physiological saline to facilitate counting was undertaken in some instances. Pus cell counts were made without previous knowledge of the group from which the specimen was obtained.

Results

The Table (opposite) records that, out of 35 patients with acute anterior uveitis, twenty (70 per cent.) had chronic prostatitis, whereas no pus cell counts of five million ml. or more were seen in a control group of 25. Seven of the 35 uveitis patients (20 per cent.) had radiological or clinical evidence of ankylosing spondylitis.

TABLE

Pus Cells (million/ml.)	Normal	Acute Anterior Uveitis
2 or less	16	11
3-5	9	4
Over 5	Nil	20

Comment

In this preliminary study, which was begun with some scepticism by both authors, the strong association of acute anterior uveitis and chronic prostatitis noted by Catterall and Perkins (1961) is, nevertheless, confirmed. These authors found that 28 per cent. of their male patients with acute anterior uveitis had Reiter's syndrome. We have excluded all patients with Reiter's disease partly because we wished to limit our studies to patients who had not been investigated or treated in any way previously and partly to avoid including any patients with a history of genito-urinary infection. The well-attested association between ankylosing spondylitis and acute anterior uveitis emerges again in our radiological findings.

Non-specific urethritis is probably a venereal disease although no organism has been consistently incriminated (Csonka, 1965); it may lead to classical Reiter's disease and/or ankylosing spondylitis, these latter complications perhaps being genetically conditioned (Csonka, 1958).

Summary

Acute anterior uveitis in 35 adult male patients was associated with chronic prostatitis in twenty (70 per cent.). Prostatitis was investigated by counting pus cells in semen ejaculates. The incidence of prostatitis in a control group of 25 patients was nil.

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