The Role of Chlamydiae in Epididymitis

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(Received December 7, 1986)

In 21 men suffering from acute or chronic epididymitis who underwent scrotal surgical exploration, diagnostic microbiological studies consisting in cultures of the epididymal tissues and mid-stream urine specimens, as well as examination of the urethral swabs — before and after prostatic massage — were performed. Laboratory tests revealed that 55 per cent of the patients younger than 40 years were infected by Chlamydia trachomatis, and 36 per cent by urinary tract bacteria. On the other hand, in only 10 per cent of the patients older than 40 years the causative organisms were Chlamydiae, whereas in 70 per cent the common urinary tract bacteriae were the agents of epididymal infection. The aforementioned microbiological examinations were proved to be reliable in demonstrating the causative bacteria for epididymitis.

Introduction

Even though infectious diseases of the male urethra and adnex organs remain complex and often puzzling, intensive studies during the last years have clarified many of their features.

Efforts have been made towards a better understanding of the aetiology, diagnostic procedures and therapy of infections of the urethra and internal male genital organs [1-6].

Since the prostate as well as the epididymis are in continuity with the urethra, both of these accessory genital organs may be exposed to the microorganisms that colonize and infect the urethra. Therefore it is not surprising that the organisms which contaminate the urethra may also infect the prostate and epididymis.

Epididymitis is the clinical syndrome resulting from inflammation of the epididymis. It is the most common of all intrascrotal inflammations, and until recently this condition was considered “idiopathic” in at least 50% of the cases.

In 1975 Heap [5] suggested that Chlamydia trachomatis might be a cause of acute epididymitis. Berger and associates in 1980 using cultures of epididymal aspirates [4], as well as Becker and associates [1] were able to prove that
C. trachomatis is the causative agent in most cases of acute epididymitis in men younger than 35 years, whereas common urinary tract pathogens account for the aetiology of the majority of acute and chronic epididymal inflammations in men above this age and that these patients often have structural urological abnormalities.

Material and methods

Twenty-one men aged 21 to 66 years and suffering from acute or chronic epididymitis underwent scrotal surgical exploration which resulted in epididymotomy, epididymectomy or orcheepididymectomy.

During the operative exposures of the epididymis, specimens were taken for common microbiology and for Chlamydia trachomatis assay (IF-technique and ELISA). In all patients additional microbiological examinations were performed which consisted in an urethral swab before and after prostatic massage for Gram-negative and Gram-positive bacteria, as well as for C. trachomatis, and in chemical and bacteriological analysis of the mid-stream urine. Urine and expressed prostatic secretion (in some cases) were also monitored for M. tuberculosis, N. gonorrhoeae, T. vaginalis and U. urealyticum.

Transurethral instrumentation or catheterization had not been carried out prior to the onset of epididymitis in any of the patients. Acute epididymitis was diagnosed in 13 men on the basis of pain and swelling in the epididymis and/or testis with fever and general malaise. Occasionally there was a history of irritative urinary symptoms and on physical examination the epididymis was swollen and acutely tender. The symptoms of acute epididymitis lasted from a few hours to about one week.

Chronic epididymitis was diagnosed in 8 men with a longer history of scrotal pain and discomfort associated with tenderness and swelling of the epididymis. In three patients there was a history of repeated episodes. The symptoms of chronic epididymitis lasted for several weeks.

Signs of concomitant urethritis or and prostatitis were present in 4 instances out of 21, while subvesical obstruction was obvious in 3.

Unsuccessful antibiotic treatment was administered before scrotal exploration and comprised oral or i.m. β-lactams, tetracyclines, aminoglycosides and erythromycin.

Results

Microbial etiology was confirmed in 17 out of 21 patients (Tables 1 and 2). A distinct prevalence of C. trachomatis epididymal infections was found in the age group of patients younger than 40 years (Table 1). In particular, epididymal tissue cultures revealed the presence of C. trachomatis in 6 cases out of 11 (55%), whereas common urinary tract pathogens were isolated in 2, M. tuberculosis in 1, and in 2 no bacteria could be demonstrated (sterile cultures). It must be noted,