PAPERS AND SHORT REPORTS

Anaerobic balanoposthitis

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Abstract

To assess the causative role of non-sporing anaerobes in cases of erosive balanoposthitis, anaerobic culture was performed on purulent discharges from 104 patients with penile ulceration, a foul-smelling discharge, and a mixed and motile bacterial flora. Most of 29 culturally confirmed infections were due to mixed anaerobes and eight to single anaerobes. A rapid response to treatment with metronidazole also confirmed the anaerobic cause of the infections.

Thus, acute anaerobic balanoposthitis can be readily diagnosed clinically and is easily treated.

Introduction

The causative micro-organisms in balanoposthitis have been variously reported as *Candida* spp,¹ group B streptococci,² herpes simplex virus,³ and *Trichomonas vaginalis*.⁴ During the last two decades the non-clostridial anaerobes have become generally recognised as a common cause of a wide variety of infective processes in man. Although their causative association with erosive and gangrenous balanitis (the fourth venereal disease of Corbus)⁵ has been recognised for a long time, more recently the non-sporing anaerobes in this particular condition have been ignored. We describe a case of anaerobic balanoposthitis and report the cultural findings of a prospective study of patients with balanitis.

Patients and methods

In June 1980 a patient presented with oedema of the prepuce, foul-smelling purulent subpreputial discharge, and tender inguinal adenitis. On retraction of the prepuce numerous superficial erosions

were visible in the coronal sulcus; there was no associated urethritis. Direct dark-field microscopy detected fusiform bacilli and coarse spirochaetes in a mixed and motile bacterial population, and anaerobic culture subsequently yielded a *Fusobacterium* spp together with *Bacteroides corrodens* and *B melaninogenicus*. Serological test for syphilis gave negative results and continued to do so at follow-up. Treatment with metronidazole 200 mg three times daily for five days, together with local application of 1% clotrimazole ointment, led to rapid resolution and cure.

During the following 18 months all cases of balanitis presenting at the special treatment clinic were studied prospectively. Anaerobic culture was performed only on purulent discharges from patients with clinical erosive balanoposthitis who had penile ulceration, a foul-smelling discharge, and a mixed and motile bacterial flora on direct dark-field examination.

Results

Of a total of 104 patients with balanoposthitis, 31 were diagnosed clinically as having anaerobic erosive balanitis by the above criteria (table).

Aetiology of 104 clinical cases of balanitis

Aetiology	No of cases	Confirmed by culture
Reiter's syndrome	2	NR
Chemical irritant	1	NR
Psoriasis	2	NR
Xerotica obliterans	1	NR
Herpetic infection	8	8
Candidal infection	30	30
"Non-specific" bacterial infection	29	29
Anaerobic erosive infection	31	29

NR = not relevant.

Although two (6%) of the 31 cases were not confirmed culturally, yielding only a scanty normal skin flora, their prompt and complete clinical response to metronidazole treatment confirmed their anaerobic aetiology. While most of the 29 confirmed cases were mixed anaerobic infections (some specimens yielding as many as four different anaerobic species) eight were monomicrobial: two due to *B melaninogenicus*, three to *B fragilis*, and three to unidentified *Bacteroides* spp. The commonest anaerobic isolates were *B melaninogenicus* (19 specimens), unidentified *Bacteroides* spp (18), *B fragilis* (9), *Fusobacterium* spp (4), and anaerobic cocci (4). Other micro-organisms were found infre-

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quently and in small numbers and were usually components of the normal skin flora, such as lactobacilli and *Staphylococcus epidermidis*. In six of the patients, however, the dominant anaerobic bacterial flora contained other potential pathogens (*Trichomonas vaginalis* in one, *Candida albicans* in three, *Staph aureus* in one, and herpes simplex virus in one).

Discussion

Although few reports on anaerobic erosive balanoposthitis have been published the condition is not uncommon; however, it is probably rarely recognised. It was formerly regarded as a typical fusospirochaetal infection⁶ but clearly it may be caused by a variety of non-sporing anaerobes, although micro-organisms that dominate the normal anaerobic bacterial flora of the oropharynx are frequently implicated. The micro-organisms which cause anaerobic balanitis may be transmitted from the mouth by fingers contaminated with saliva or more commonly orogenital contact. The infection may also be acquired venereally from women with overt anaerobic vaginitis or from those whose normal vaginal flora is unusually dense.

Poor genital hygiene and phimosis predispose to anaerobic erosive balanitis; the infection does not occur in those who have been circumcised. In neglected cases anaerobic balanoposthitis

may progress to gangrenous balanitis (or phagedaena), in which there is rapid destruction of the glans and, in some cases, of the entire shaft of the penis. Such advanced cases are not uncommon in some countries of the Third World.

Acute anaerobic erosive balanitis is readily diagnosed clinically by the three features referred to earlier and rapidly responds to metronidazole treatment (200-400 mg orally three or four times daily for five days).

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Benzodiazepine hypnotics remain effective for 24 weeks

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Abstract

Ninety-seven poor sleepers aged 40-68 years took capsules nightly for 32 weeks and made daily subjective ratings. The benzodiazepine hypnotics lormetazepam 2 mg and nitrazepam 5 mg appeared still to improve sleep after 24 weeks of intake when compared with continuous placebo intake. The sustained effectiveness was most evident in a significant shortening of the time taken to fall asleep in patients receiving lormetazepam. After withdrawal, rebound occurred, so that, for two to three weeks, sleep latency and the quality of sleep were significantly worse than baseline values. The impairment was maximal on the second night after withdrawal of lormetazepam and on the fourth night after withdrawal of nitrazepam.

It is concluded that benzodiazepines remain effective for at least 24 weeks but that a period of disturbed sleep may be expected after withdrawal.

Introduction

Patients often take hypnotic drugs for months or years, yet the Committee on the Review of Medicines¹ saw "little evidence

that sedative hypnotics, including benzodiazepines, continue to be effective when used nightly in patients over long periods." The committee also pointed to withdrawal symptoms after prolonged intake, and, after small doses, we have found these symptoms to last two weeks or more. We compared the subjective effects of taking placebo or nitrazepam 5 mg or lormetazepam 2 mg nightly for 24 weeks.

Methods

We studied 100 volunteers (68 women and 32 men) aged 40-68 years who were poor sleepers. Through a chain of contacts we intimated that we required volunteers not currently taking sleeping pills or other central nervous system drugs, willing to help for 32 weeks, and with compatible work habits. Interviews with over 300 people, to eliminate good or average sleepers, left 100 who considered themselves to be poor sleepers and who entered the study after a general medical examination. They agreed to take no other hypnotic or central nervous system drugs during the study and were cautioned over driving, especially after alcohol.

The study was double blind, except that we knew that the subjects would be given a placebo during the initial and final four-week periods. The 100 subjects were divided into groups of four for distribution of the drugs. In any group of four two subjects received lormetazepam 2 mg, one nitrazepam 5 mg, and one placebo. The order of drugs within every four was randomised. Entry into the study was spread over six weeks. Capsules were taken at bedtime. Fifty subjects took a placebo for four weeks followed by lormetazepam 2 mg for 24 weeks followed by placebo for four weeks; 25 took a placebo for four weeks, nitrazepam 5 mg for 24 weeks, and placebo for four weeks; and 25 took a placebo throughout the 32 weeks.

Each subject attended for a medical check at weekly intervals for the first eight weeks and thereafter every two weeks. The frequent contacts were important in sustaining co-operation and helped to reduce drop-outs.

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