

MEDICAL PRACTICE

Gynaecology in General Practice

Other Sexually Transmitted Diseases—II

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British Medical Journal, 1971, 2, 507-509**Trichomoniasis**

Infection of the female genitourinary tract with *Trichomonas vaginalis* is common and is found in about 50% of women with gonorrhoea. In 1969 12,595 cases were reported from the clinics. The organism is more difficult to identify in male patients (1,001 cases reported in 1969). Many other women with this condition attend gynaecological outpatient departments. Most admit to recent sexual intercourse, but the infection can also be spread by close genital contact and so may be found in virgins. *T. vaginalis* may persist without symptoms in the female lower genitourinary tract for many years and thus postmenopausal women may have been infected many years previously. Accidental infection may sometimes occur from borrowed towels and clothing or by lack of sterilization of gloves or instruments in hospital.

SIGNS AND SYMPTOMS

The patient may be symptomless but usually complains of an irritant vaginal discharge, which causes dyspareunia, and sometimes of urinary symptoms. There may be obvious vulvitis and excoriation of the thighs, and the passage of a speculum may be painful. The yellow frothy vaginal discharge has a typical, musty odour; the vaginal wall is injected; and there may be red spots on the mucosa of the cervix. Symptoms are exacerbated in pregnancy. The vaginal pH is less acid and may range from 6.0 to 8.0. The urinary tract is also affected in about 20% of cases, and local

complications include Skenitis and Bartholinitis. Spread to the upper genital tract is, however, rare.

DIAGNOSIS

T. vaginalis may be identified in the moist slide (the dark ground or phase microscope examination may be used). Inoculation of a vaginal swab into culture medium (Feinberg-Whittington or Bushby) will give up to 30% extra positive findings if incubated at 37°C for 24-48 hours; a few additional positive findings will be made if a subculture is incubated for a further 48 hours. *T. vaginalis* may also be identified on cervical scrape stained by the Papanicolaou method.

TREATMENT

The treatment of choice is oral metronidazole, either 200 mg three times a day for seven days or 400 mg twice a day for five days. Another recently introduced drug, nitrimidazine, is effective at 250 mg twice daily for six days. The cure rate is 80% provided the male sex contact is also examined and treated. Treatment may fail because of poor absorption of the drug, and doubling the daily dosage may be effective. In some cases, however, vaginal bacteria are capable of breaking down the drugs and thus preventing effective action; these are the only cases in which supplementary local vaginal therapy is indicated. Follow-up is similar to that of gonorrhoea. It is customary not to give metronidazole in the first trimester of pregnancy, though no teratogenic action of the drug has been recorded.

Candidiasis (Moniliasis)

The fungus candida (usually *Candida albicans*) may be present as a saprophyte in the female genital tract, but under

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certain conditions it becomes pathogenic, giving rise to signs and symptoms, and is then capable of transmission to the male sex partner. Factors inducing pathogenicity are glycosuria, pregnancy, oral contraceptives, and the administration of a tetracycline or immunosuppressant drug.

SIGNS AND SYMPTOMS

The patient's main complaint is of vulval pruritis associated with a white vaginal discharge, and these may be associated with anal pruritis. The skin of the external genitalia, thighs, and perineum may be red, shiny, and fissured; white patches may be seen on the vulval mucosa, while a thick white curd-like vaginal discharge may be seen through a speculum; the vaginal wall may also be inflamed. The male sex partner may have a candidal urethritis, balanitis, or involvement of the skin of the penis, scrotum, or thighs; in some cases candida may be found in the absence of any skin or mucosal signs.

DIAGNOSIS

Candida can be identified by a Gram-stained smear as Gram-positive yeast forms; these may show buds, and the stippled mycelium is easily identified. Occasionally, however, sperm heads can be mistaken for yeast forms, and the fine strands of streptothrix and leptothrix have to be distinguished. Culture on Sabouraud medium will grow the typical white colonies of candida at incubator temperature in 48 hours or more slowly at room temperature. The colony can be checked by Gram staining of a smear. *C. albicans* and other types of candida can be differentiated by an agglutination test.

TREATMENT

At present there is no effective systemic treatment. Nystatin is the best locally applied preparation; vaginal pessaries may be inserted morning and evening and ointment applied to the vulva and other affected areas. Treatment should last for two weeks, and the male sex partner should receive similar treatment with ointment only. In some cases of relapse in women autoinfection may occur from the gut. In this case the initial course of treatment should be repeated with additional oral nystatin 500,000 units three times daily during the two weeks. Many other local preparations have been advocated. Relapse is not uncommon during pregnancy; women taking oral contraceptives may have to use some other contraceptive device in the case of repeated relapse. The possibility of reinfection from the sex partner must always be excluded.

Genital Warts (Condylomata Acuminata)

Genital warts are caused by a virus, which can be identified by the electron microscope. The infection is passed by genital contact, but cannot be inoculated on to the skin. In this respect genital warts differ from skin-type warts, which may occasionally also be inoculated on to the genitals. The incubation period is long and may be up to nine months. Growth, which is mainly on the mucosa of the vulva, starts as minute pointed lesions but may reach tumour-like proportions. Warts may also be seen on the vaginal wall, on the vaginal portion of the cervix, and at the anal margin. The growth of warts is encouraged by any vaginal discharge—hence the misnomer “gonorrhoeal warts”—but in fact their growth is more commonly exacerbated by trichomoniasis.

TREATMENT

Podophyllin in spirit ranging from 10-25% may be applied to the warts. Care should be taken to protect the surrounding skin, and dusting powder may be applied after each treatment. The patient should be instructed not to wash off the application for 12 hours; several applications are usually needed. Phenol and trichloroacetic acid applications have also been used. To remove recurrent or giant lesions electrocautery is used under general anaesthesia.

Genital Herpes (Herpes Simplex Type II)

Genital herpes is now known to be caused by a different virus from that of labial herpes (Type I), in respect both of its growth on chorioallantoic membrane and its antibody formation in serum. Grouped vesicles are formed on the vulva and surrounding skin in the perineum or on the vaginal part of the cervix. These vesicles rapidly break down into small confluent ulcers, and secondary pyogenic infection with tissue necrosis is common, in which case the inguinal glands may become enlarged and tender. Lesions around the urinary meatus may cause dysuria. The degree of tissue destruction is most pronounced in the primary infection, which follows sexual contact, and recurrences seem to be rarer in women than in men.

Diagnosis may be confirmed by a cytological scrape (including a cervical scrape) showing the typical multinucleate giant cells; culture on Hanks medium will show the typical viral changes on cell cultures. Recent evidence suggests that genital infection with herpes simplex Type II virus is associated in some way with the development of carcinoma in situ, the latter having a higher incidence in promiscuous women.

TREATMENT

Normal saline washes or idoxuridine by local application in concentrations ranging from the routine 0.1% up to 5% (in special solvent) may be used. Idoxuridine seems to relieve symptoms and promote healing, but there is no evidence that it is curative. Secondary pyogenic infection can be controlled by a sulphonamide drug, such as sulphamethoxazole-trimethoprim 2 tablets twice daily for five days.

Genital Molluscum Contagiosum

Genital molluscum contagiosum is a viral infection transmitted by close bodily contact. Where lesions occur in the genital area probably they have been sexually transmitted and similar lesions may be found in the male sex contact. Individual lesions are small raised and circumscribed with a central crater filled by a plug. If this plug is removed and macerated in liquor potassiae, the typical “balloon cells” can be seen. Giemsa staining of the plug can show virus inclusions. Treatment is with phenol or the electrocautery applied to the crater of each individual lesion.

Genital Scabies

Scabies (due to *Sarcoptes scabiei*) is commonly transmitted by close bodily contact, often of a sexual nature between adults. The typical scabetic burrows tend to occur in the genital region as well as in the typical distribution elsewhere on the body. In some cases only genital lesions occur, on the penis and scrotum in the man and on the vulva in the woman. The patient will complain of itching, especially at night. The finding of the female adult sarcoptes or her eggs in a burrow scraped out with a small pointed instrument with a drop of

liquor potassiae on the lesion and examined under the 10-mm objective of the microscope confirms the diagnosis.

Treatment is with application of 25% benzyl benzoate at a cleansing centre or with Lorexane ointment (50 g tube) at home following the usual treatment instructions. Sex contacts and others in close bodily contact in the family may need similar treatment.

Genital Lice (Pediculosis Pubis)

Genital lice are commonly transmitted by sex contact. They multiply in the pubic region, but from this area they may

spread to all the other hairy areas of the body, except the scalp. The patient complains of pronounced skin irritation of the areas affected. Pubic lice are seen anchored at the hair roots and can be removed with forceps for certain identification under the 10 mm objective of the microscope, when the typical crab-like legs will be seen. The nits (eggs and containers) on the hair, which can be cut off and also examined under the 10 mm objective, can be similarly identified. Treatment is with D.D.T. or gammexane. The latter is also available as a lotion (Quellada) for home use in 55-ml bottles with instructions for application. Where possible sex contacts must be traced, diagnosed, and treated. Other members of a family sharing a bed should also be checked.

Clinical Problems

Pain Relief in Hospital: the more Widespread Use of Nitrous Oxide

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Summary

A trial was conducted of Entonox for pain relief in minor, but painful, procedures which are conducted in wards, accident centres, and radiological units. The gas was self-administered by the patient using a demand apparatus. The administration was supervised by qualified nurses, specially trained in the properties of Entonox and the inhalational unit. The results confirm that the gas is safe in the hands of these personnel. Gratifying pain relief occurred in most patients with almost complete freedom from undesirable side effects. It is suggested that patient comfort in hospital can be considerably improved by utilizing this method of analgesia to the full.

Introduction

"On the day when the inflammation was most troublesome, I breathed three large doses of nitrous oxide. The pain always diminished after the first four or five respirations. . . . As the former state of mind returned the state of organ returned with it"—Davy.¹

Despite Sir Humphry Davy's crucial observation 170 years ago, the excellent general analgesia provided by nitrous oxide has remained almost exclusively confined to the field of obstetrics, though this specialty has no monopoly in the production of pain. Some of the reservations in the past have been due to

the shortcomings of the apparatus which often did not ensure a safe and stable percentage of oxygen in the inspired mixture.²⁻⁴

In the wards, accident centres, and radiological departments throughout the country every day patients are subjected to a variety of painful episodes often without thought to analgesia because the procedure is deemed a minor one by those who are administering the pain rather than receiving it. Yet it is these so-called minor events which often give the patient a very jaundiced view of his stay in hospital.^{5,6} In the average general hospital, therefore, there is a need for a safe and effective general analgesic, of rapid onset, which is speedily eliminated to ensure a quick recovery. Many patients are deprived of pain relief for unpleasant procedures because of very reasonable caution in the use of opiates.

Nitrous oxide is a powerful analgesic and sedative which, if given with adequate oxygen, does not cause respiratory or cardiovascular depression or other undesirable side effects. The low blood or fat solubility plus the relatively low anaesthetic potency provide the scientific basis for Sir Humphry Davy's observation that this form of analgesia has a rapid onset, with a speedy recovery once inhalation stops. Entonox, a fifty-fifty mixture of nitrous oxide and oxygen contained in a single cylinder, was first prepared in 1961.⁷ The mixture remains as a stable single-phase gas, even when compressed to almost 2,000 lb/in² (140 kg/cm²) at temperatures above -6°C. Together with the development of the gas mixture came the design of a compact and reliable inhalational unit attached to the cylinder. This unit functions by using the demand or intermittent principle, so that the gas does not flow unless a negative pressure is applied to the inspiratory port. This, in essence, requires an airtight fit between the mask and the face. The patient should always hold the mask himself. Then if he becomes drowsy, his grip on the mask will relax, thus breaking the airtight seal and consequently gas flow will stop. By using this principle of self-administration the patient is safeguarded from a relative overdose of the gas, and he is prevented from inadvertently entering into the excitement stage of general analgesia or even loss of protective laryngeal reflexes at deeper levels.

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