
Genital candidosis in general practice

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SYMPOMATIC genital candidal infection (genital candidosis) is a common complaint. It has been estimated that in a general practice with a combined list of 2,500 patients about 17 women annually might present with candidosis.¹ Data collected between 1970 and 1980 on 1,270 women who were routinely screened in a general practice showed that *Candida* can be found alone or with other genital pathogens in one third, and that a general practitioner with a combined list of 3,500 patients could expect to treat 18 new cases of candidal infection each year.²

The assumption that genital candidosis is usually symptomless was confirmed by a survey at a family planning clinic where unselected testing was performed on women attending for contraceptive advice (*Candida albicans* being the main fungus isolated).³ During pregnancy, too, *Candida* are predominantly commensal: only two out of 75 women with *Candida* at the 16th week went on to develop thrush.⁴ On the other hand, it has been reported that candidal vaginitis afflicts 16–17 per cent of all pregnant women,⁵ and as a 63 per cent rate of *Candida* isolates from symptomless pregnant women has been attained,² prophylactic treatment of such women is advisable to prevent frank infection and also to lessen the risk of its spreading to the newborn child at parturition.

A clinical diagnosis of genital candidosis is only certain in about 9 per cent of cases, and cervical cytology will confirm only 14 per cent of cases² since the fungi can be scanty and concealed by the clumping together of squames (C. Grubb, personal communication). Although laboratory culture of a high vaginal swab is essential for accuracy, an immediate confirmation is possible if the general practitioner can perform direct microscopy of an unstained wet mount of cervicovaginal material on a plain glass slide; this shows the fungus (yeast cells, often budding, and sometimes mycelia). Another advantage of this rapid technique is the differential diagnosis of trichomoniasis: the motile flagellates of the protozoan *Trichomonas vaginalis* can be seen. In both infections an atypical discharge may be the only clinical feature. Furthermore, combined infection is possible.

Twenty-two years ago Wilson stated that for *Candida* to be able to contribute to, or cause, disease there had to be some prior presence of local or systemic abnormality;⁶ more recently, quantitative isolations have

shown that *Candida* are associated with cervicitis.⁷ In non-pregnant women, *Candida* are more likely to be found when there is cervicitis and almost twice as likely when there is cervical erosion (ectopy).² No such significant relationship has been established between *Candida* and other cervicovaginal pathology such as senile atrophy, polyp, trichomoniasis or neoplasia.²

The fact that *Candida* are usually symptomless may be due to synergism or yeast suppression.⁸ When symptoms do occur, discharge accounts for 41 per cent, pruritis for 19 per cent and both for 10 per cent. Intermenstrual bleeding, which is seldom due to 'Pill breakthrough', accounts for 9 per cent of complaints from otherwise normal women compared with 8 per cent as urinary symptoms.² In a survey of women at a family planning clinic, low backache and dyspareunia constituted 23 per cent of symptoms in 38 per cent of women with cervical erosions and infected discharge.⁹ These two complaints and other unrepresentative features such as menstrual molimina, lower abdominal pain and constitutional upset will be more frequent than usual, as will be the clinical finding of cervical friability, when cervical cytology reports nonspecific cervicitis.²

Candida use the glycogen content of the genital epithelium as their main nutrient. The glycogen is oestrogen dependent, hence the increased susceptibility to candidal infection during pregnancy. It might be thought, therefore, that such oral contraception would increase the proliferation of genital *Candida*; this has been confirmed but without a significant increase in candidosis,^{2,3,10} and is not a common reason for stopping the Pill.

About one third of the partners of the women with genital candidosis have penile *Candida*, and 25 per cent of these men develop candidosis which presents as balanoposthitis of varying degree.² The stated use of condoms as the method of contraception does not protect males against the transmission of genital candidosis.² The reasons for this can only be guessed.

Antibiotics and metronidazole may increase *Candida* by interfering with the normal vaginal flora,¹¹ and after intensive administration of a tetracycline (2 g per day for 14 days) a significant though ephemeral increase in candidal isolates does occur.²

Therefore, for women with chronic or recurrent candidosis it is beneficial to employ prophylactic antifungal measures when prescribing broad-spectrum antibiotics. On the other hand, three months after chemotherapy, as standard in general practice, the

© *Journal of the Royal College of General Practitioners*, 1984, 34, 449-450.

increase in candidal isolates has been found to be only 2 per cent, and even when the contraceptive pill was taken concurrently they were only increased by 5 per cent.² Antibiotics induce resistance to *Candida albicans in vitro*, but the resultant variants are less pathogenic than normal isolates.¹² This and the foregoing facts should reassure general practitioners, who regularly have to prescribe against infection.

References

1. Office of Population Censuses and Surveys/Royal College of General Practitioners/Department of Health and Social Security. Morbidity statistics from general practice. Second National Study 1970-71. *Studies on medical and population subjects No. 26*. London: HMSO, 1974.
2. Fox H. *Studies in lower genito-urinary medicine in a general practice*. Pp 123-152. MD Thesis, University of London, 1981.
3. Goldacre MJ, Watt B, Loudon N, et al. Vaginal microbial flora in normal young women. *Br Med J* 1979; 1: 1450-1453.
4. Dawkins SM, Edwards JMB, Clayton YM. *Candida albicans* in vaginal secretions in pregnancy. In: *Fungus diseases and their treatment*. Winner HI (ed). London: Butterworth, 1958.
5. Hurley R. Candidal vaginitis. *Proc R Soc Med* 1977; 70: 7-9.
6. Wilson JW. The biology of experimental human cutaneous moniliasis (*Candida albicans*). *Arch Dermatol* 1962; 85: 254-255.
7. Lindner JGEM, Plantema FHF, Hoog-Kamp-Korstanje JAA. Quantitative studies of the vaginal flora of healthy women and of obstetric and gynaecology patients. *J Med Microbiol* 1978; 11: 233-241.
8. Morton RS. Vulvo-vaginal candidosis. *Br Med* 1979; 2: 43-45.
9. Goldacre MJ, Loudon N, Watt B, et al. Epidemiology and clinical significance of cervical erosion in women attending a family planning clinic. *Br Med J* 1978; 1: 748-750.
10. Oriel JD, Partridge BM, Denny MJ et al. Genital yeast infections. *Br Med J* 1972; 2: 761-764.
11. Catterall RD. Advances in the treatment of sexually transmitted diseases. *Practitioner* 1971; 207: 516-523.
12. Winner HI. Studies on *Candida* (abridged). *Proc R Soc Med* 1972; 65: 433-436.

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Body shape perception in patients with anorexia nervosa

The perception of body shape was studied in 15 female patients with anorexia nervosa and 15 age-matched controls. A lens was used which could be manipulated to cause a horizontal distortion of an image projected onto a video monitor. The patients showed a greater tendency to over- and under-estimate their present body shape than did the controls. Further, the patients' desired body shape was significantly thinner than that of controls, as was their estimation of what constitutes a normal body shape. These findings are discussed in relation to the literature and it is suggested that they may have important implications for treatment.

Source: Touyz SW, Beumon PJV, Collins JK, McCabe M, Jupp J. Body shape perception and its disturbance in anorexia nervosa. *Brit J Psychiatry* 1984; 144: 167-171.

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