Journal Review


The relationship between yeast colonisation, symptoms and antifungal self-medication remains poorly understood. Previous studies have involved pregnant women or women using hormonal contraception, and many have been underpowered.

This American cohort study aimed to determine the prevalence of yeast colonisation over a 1-year period in 18-30-year-old, sexually active, non-pregnant women. A total of 1248 women were recruited and more than 80% of the scheduled visits at baseline, 4, 8 and 12 months were attended. At each visit a questionnaire was used to enquire about symptoms, antifungal use, sexual/personal behaviour and contraception in the preceding 4 months. A swab of vaginal fluid was transferred to candida-selective culture media. Some 70% of women were colonised by vaginal yeast on one or more visits, but only 4% were colonised at all four visits. Factors associated with yeast colonisation included marital status (e.g. single women were more likely to be colonised), sexual activity (e.g. women who had had sexual intercourse in the past 4 days were three times more likely to be colonised), and concurrent colonisation with lactic acid bacteria and group B streptococci. Symptoms of pruritus and vaginal burning were associated with yeast colonisation but antifungal use was not.

The results support the concept that Candida albicans exists as part of the normal vaginal flora in many healthy asymptomatic women, and that host factors influence the development of thrush symptoms. The authors suggest that the lack of an association with antifungal use casts doubt on the reliability of self-diagnosis and self-treatment of thrush symptoms. However, the study was limited by possible recall bias and the fact that most women were not examined at the time they had symptoms or used antifungal treatment. Moreover, the study population was relatively young (80% under 25 years) and from similar socioeconomic backgrounds, so may not be representative of the wider female population.

The finding of an association between prolonged DMPA use and thrush is surprising since DMPA is used by millions of women worldwide. However, the authors suggest that this finding may be important for clinical practice and that further studies are needed to confirm their findings.

In summary, the study failed to show any urological benefits of HRT and indicated deleterious effects on urinary incontinence symptoms, particularly in older women. Has yet another HRT myth been laid to rest? The evidence is certainly unfavourable and is likely to discourage the use of systemic HRT primarily for urinary symptoms.

Reviewed by Louise Melvin, MRCOG, DFFP
Clinical Research Fellow, Simpson Centre for Reproductive Health, Royal Infirmary of Edinburgh, Edinburgh, UK


This is a comprehensive review of the progress made so far in the attempts to develop a credible male hormonal contraceptive. The principle behind male hormonal contraception is that it is possible to arrest sperm production by administering exogenous sex steroids that act via the hypothalamic-pituitary axis to suppress luteinising hormone and follicle-stimulating hormone levels. This approach also decreases production of testosterone so ‘add-back’ androgens are required to maintain physiological levels. Grams et al. conducted a review of the only randomised controlled male hormonal contraceptive trials that used azospermia as their outcome. They justified their exclusion of studies reporting oligozoospermia as an outcome by two observations. First, that it will be difficult to achieve azospermia for contraceptive efficacy. However, it has previously been established that severe oligozoospermia (<1 million/ml) will provide efficacy comparable with existing methods of contraception. Their second reason is more robust, stating that the definitions of oligozoospermia varied greatly between trials and made exact comparisons difficult.

There are many different regimens that have been tested as potential male hormonal contraceptives including testosterone alone, and testosterone in combination with progestogens or GnRH antagonists. Testosterone is currently available as short- and long-acting injectables, slow-release subcutaneous pellets, transdermal patches, cutaneous gel, oral preparations and a buccal adhesive tablet. Progestogens are available as short- and long-acting injectables, as oral preparations, long-acting injectable and slow-release subcutaneous pellets, transdermal patches, cutaneous gel, oral preparations and a buccal adhesive tablet. Progestogens are currently only available as injectables. There is an urgent need for the development of more robust, stating that the definitions of oligozoospermia varied greatly between trials and made exact comparisons difficult.

There are many different regimens that have been tested as potential male hormonal contraceptives including testosterone alone, and testosterone in combination with progestogens or GnRH antagonists. Testosterone is currently available as short- and long-acting injectables, slow-release subcutaneous pellets, transdermal patches, cutaneous gel, oral preparations and a buccal adhesive tablet. Progestogens are available as short- and long-acting injectables, as oral preparations, long-acting injectable and slow-release subcutaneous pellets, transdermal patches, cutaneous gel, oral preparations and a buccal adhesive tablet. Progestogens are currently only available as injectables. There is an urgent need for the development of more robust, science-based contraceptive methods for men.

Reviewed by Colin Duncan, MD, MRCOG
Consultant Gynaecologist, Simpson Centre for Reproductive Health, Royal Infirmary of Edinburgh, Edinburgh, UK