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ORIGINAL ARTICLE

The prevalence of an excessive prepuce and the effects of distal circumcision on premature ejaculation

Luigi Gallo

Gallo Uro-Andrology Centre, Via Santa Lucia 97, 80132 Naples, Italy

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KEYWORDS

Circumcision;
Excessive prepuce;
Penile hypersensitivity;
Premature ejaculation;
Risk factor

ABBREVIATIONS

IELT, intravaginal ejaculatory latency time;
PE, premature ejaculation;
PEDT, Premature Ejaculation Diagnostic Tool;
SSRI, selective serotonin reuptake inhibitor

Abstract ***Objective:*** To investigate the prevalence of an excessive prepuce in patients with premature ejaculation (PE) and to evaluate the effectiveness of distal circumcision in reducing the penile hypersensitivity, which is thought to be a cause of PE.

Patients and methods: Men were considered to have an excessive prepuce if the foreskin exceeded the external urethral meatus by ≥1 cm in the flaccid state. The diagnosis of PE was based on the Premature Ejaculation Diagnostic Tool (PEDT) questionnaire score and on the intravaginal ejaculatory latency time (IELT). These features were evaluated at baseline and at 6 months after circumcision.

Results: Lifelong PE was diagnosed in 352 patients of whom 208 (59.1%) had an excessive prepuce. We offered those with an excessive prepuce a circumcision, as a potential definitive treatment for their PE, and 27 (13%) men accepted. At 6 months after circumcision, there was an increase in the mean (SD) IELT from 40.4 (16.5) to 254 (66.8) s ($P < 0.001$) and the mean (SD) PEDT score decreased from 17 (2) to 6.6 (1.9) ($P < 0.001$). Overall, 26 of the 27 (96%) patients that had a circumcision reported an IELT increase.

Conclusions: An excessive prepuce is very common in patients affected by PE. Although accepted by only 13% of our patients, distal circumcision was shown to be a very effective surgical treatment for definitive treatment of PE. We therefore

E-mail address: info@studiourologicogallo.it
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recommend assessing patients complaining of lifelong PE for an excessive prepuce and if they have an excessive prepuce to suggest that they undergo distal circumcision.

Introduction

Premature ejaculation (PE) is a very common male sexual dysfunction, with a worldwide prevalence of ~30% [1]. Penile hypersensitivity has been established as a cause of PE [2,3]. The area of the preputium is considered the most sensitive part of the human penis [4], hence men with an excessive prepuce could be at risk of PE due to higher penile sensitivity. To reduce excessive sensitivity in men with PE, the surgical removal of the prepuce by circumcision could potentially be a definitive treatment for men presenting with an excessive prepuce and complaining of PE [5]. In fact, several published studies have already shown a beneficial effect of circumcision in lengthening the time of sexual intercourse and in reducing symptoms caused by PE [6]. The aims of the present study were: (i) to investigate the prevalence of excessive prepuce in patients with lifelong PE; and (ii) to evaluate the effectiveness of a special type of distal circumcision in ameliorating PE symptoms and on lengthening the intravaginal ejaculatory latency time (IELT) in patients with PE who were diagnosed with an excessive prepuce.

Patients and methods

All patients attending our centre seeking treatment for lifelong PE underwent a meticulous medical and sexual history appraisal and a physical examination. The diagnosis of PE was based on the Premature Ejaculation Diagnostic Tool (PEDT), a self-administered five-item questionnaire validated by Symonds et al. [7], translated and adapted by the author in Italian (Appendix 1). This clinical tool explores all the domains required for a diagnosis of PE, i.e. a lack of ejaculatory control, decreased satisfaction with sexual intercourse, intrapersonal distress, and negative impact on quality of life. The score range for the PEDT is from zero (normal men) to 20 (very severe PE). Men were considered to be affected by PE if the total score was >10. The physical examination was performed for each individual with the aid of a ruler, in a warm room and with the penis in the flaccid state: if the foreskin exceeded the external urethral meatus by ≥ 1 cm it was considered as an 'excessive prepuce' (Fig. 1). We proposed to all patients affected by lifelong PE and presenting with an excessive prepuce that they undergo a distal circumcision as a definitive treatment for their condition. Furthermore, to evaluate the prevalence of excessive prepuce in the normal population, we recorded the number of patients presenting with an excessive prepuce coming to our centre for other urological problems and in whom a diagnosis of PE was excluded (i.e. a PEDT score of ≤ 10).

All patients were evaluated by the same physician (L. G.) and signed an informed-consent form before inclusion. The present study received approval by the ethics committee of our centre.

Exclusion criteria comprised: (i) genital infection; (ii) depression and neurological disorders; (iii) erectile dysfunction (ED), defined as a score from the five-item version of the International Index of Erectile Function (IIEF-5) < 21; (iv) current history of alcohol or drug abuse; (v) use of tricyclic antidepressants, monoamine oxidase inhibitors or selective serotonin re-uptake inhibitors (SSRIs); and (vi) an unstable relationship [8].

Couples that were considered eligible for inclusion underwent a baseline evaluation period of 1 month during which they were asked to have sexual intercourse at least three times, separated by an interval of 24 h, and to record the IELT in a diary card that was provided. To measure IELT, each patient was given a stopwatch and instructed that he, or his partner, should time his IELT for each sexual encounter, by starting timing at vaginal penetration and to stop timing at the start of ejaculation. The baseline IELT for each patient was calculated as the arithmetic mean IELT of all attempts during the first month. After this baseline period, necessary for patient evaluation, distal circumcision surgery was scheduled.

The distal circumcision was performed under local anaesthesia: 20 mL mepivicaine solution injected at the base of the penile shaft. The portion of prepuce to be removed was previously demarcated using a dermographic pen, leaving residual foreskin sufficient to cover only the corona glandis after the surgery (Fig. 1). The distal incision was made very close to the corona glandis (Fig. 2). The ventral incisions were made in a 'V' figure in order to perfectly reconstruct the frenulum (Figs 2 and 3). The prepuce was incised until the deep dartos layer. Blood vessels were carefully coagulated under direct vision. To reduce the excessive sensitivity at the ventral side of the penis a frenulectomy was also performed, using a technique that was already published by our centre [9]. Then the excessive prepuce was removed and a double layer suture with separated sutures was performed: the dartos layer was sutured