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Circumcision during the phallic period: does it affect the psychosexual functions in adulthood?

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Summary

The aim of this study was to elucidate whether circumcision during the phallic period (3-to 6-year old) has a negative impact on psychosexual functions in adulthood. Over a 6-month period, healthy and sexually active men between 30 and 40 years without any comorbidities were involved. Participants were evaluated with detailed history, physical examination, International Index of Erectile Function (IIEF), Premature Ejaculation Diagnostic Tool (PEDT) and Beck Depression Inventory. Cases were divided into two groups according to the age at circumcision (group-1: phallic period, group-2: nonphallic period). Student's *t*-test and Kruskall–Wallis were used for statistical analysis. Of the 321 participants, a total of 302 men were eligible for the study (group-1: $n = 135$, group-2: $n = 167$). No statistical difference was found between the mean total IIEF scores (group-1: 25.1 ± 4.8, group-2: 25.4 ± 4.6, $P > 0.05$). The subdomains of IIEF; erectile function, orgasm, sexual desire, intercourse satisfaction, overall satisfaction were also found to be comparable. Additionally, the PEDT scores were similar between the two groups (group-1: 8.2 ± 4.8, group-2: 8.7 ± 5.4, $P > 0.05$). Finally, Beck depression scores were also found to be comparable between the groups (group-1: 10.8 ± 10.4, group-2: 9.8 ± 8.9, $P > 0.05$). Our results suggest that circumcision during the phallic period does not negatively affect the psychosexual functions in adulthood.

Introduction

Male circumcision is the most common surgical procedure worldwide. At least one-third of all men in the world are reported to be circumcised (Waskett, 2011). The best timing of circumcision has been a subject of debate in numerous publications. The possible physical, psychological and sexual alterations are the underlying mechanisms of this debate. Many authors defended the idea of infant circumcision due to different reasons, such as better healing, protection against urinary tract infections and decreased perception of pain (Wiswell, 1990; Morris *et al.*, 2012). Some other investigators from HIV endemic regions recommended circumcision as early as possible for protection against transmission (Weiss *et al.*, 2008). On the other hand, little is known about the future effects of male circumcision.

The phallic period is described as an important time between the age of 3 and 6 years, in which the child develops sexual identity and adult sexual attitudes. The interest of the child in his genital organ reaches the maximum in the phallic phase. Although there are no evidence-based data, the physicians are discouraged to perform circumcision due to castration anxiety and possible unfavourable psychosexual effects in the future. However, in many countries, due to traditional or religious beliefs, circumcision is applied before puberty under local anaesthesia and many of them are performed during the phallic period.

In this cross-sectional comparative study, we have tried to elucidate whether circumcision during the phallic period in Turkish population has a negative impact on psychosexual functions in adulthood. To our knowledge, this is the first study investigating the future psychosexual functions after phallic phase circumcision using validated questionnaires.

Patients and methods

Over a 6-month period (January–June 2012), a total of 321 men between 30 and 40 years were prospectively

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enrolled into the study. The study population was recruited from the healthcare workers of two referral hospitals. Subjects having any chronic disease (diabetes mellitus, hypertension, coronary artery disease, hyperlipidaemia, hypogonadism, chronic renal failure, schizophrenia, depression, neuropsychiatric disorders) and/or using any medications that might affect the mental and erectile functions were excluded. Men without regular sexual intercourse in the past 6 months were also not enrolled. Hence, only sexually active and healthy men were eligible for the study.

Participants were evaluated with detailed history, physical examination and validated questionnaires; International Index of Erectile Function (IIEF), Premature Ejaculation Diagnostic Tool (PEDT) and Beck Depression Inventory (BDI). IIEF is a self-administered questionnaire, which is widely used to assess the overall sexual status of men. It includes 15 questions that investigate the following subdomains: erectile function, orgasmic function, sexual desire, intercourse satisfaction and overall satisfaction. The validation and Turkish translation of IIEF questionnaire was previously performed and available for use since 2002 (Akkus *et al.*, 2002). PEDT is also a self-administered questionnaire and is used to diagnose premature ejaculation (PE) in men. The Turkish validation was previously published, and it has been stated that the 5-item Turkish version of PEDT is reliable and more applicable than measuring intravaginal ejaculatory latency time (IELT) in the diagnosis of premature ejaculation (Serefoglu *et al.*, 2009). BDI was developed a long time ago by Beck *et al.* (1961) and Turkish validation is available since 1988 (Hisli, 1988). It includes 21 questions and the main purpose of this questionnaire is to evaluate the presence and the severity of depression. All in all, those three validated questionnaires (IIEF, PEDT, BDI) were applied to all participants of the study.

Patient age, age at circumcision and the type of anaesthesia used during the circumcision were also recorded. Cases were divided into two groups according to the age at circumcision (group-1: phallic phase, group-2: nonphallic phase). All the parameters were statistically compared between the groups. Student's *t*-test and Kruskall–Wallis test were used for statistical analysis. The *P*-value of <0.05 was used to indicate the statistical significance. This study was approved by the Istanbul Bezmialem Vakif University ethical committee and complies with the Helsinki declaration.

Results

Of the 321 men, a total of 302 subjects were eligible according to the inclusion criteria. Participants were divided into two groups; group 1: phallic period (n = 135), group 2: non-phallic period (n = 167). The mean age of the participants were found to be comparable ($P > 0.05$, Table 1). Majority of the men reported that they were circumcised under local anaesthesia (98.4%). The comparison of the type of the anaesthesia between the groups revealed similar findings ($P > 0.05$).

The total IIEF score of all subjects was 25.3 ± 7.6. The prevalence of erectile dysfunction (total IIEF $\leq$ 25) was 21.2%, whereas the severe ED (total IIEF $\leq$ 10) was only 4.1%. The prevalence of premature ejaculation (PEDT $\geq$ 11) was 27.4%. Moreover, the prevalence of depression (BDI $\leq$ 16) among all subjects was 15.6%.

No statistical difference was found between the mean total IIEF scores (Table 1). The subdomains of IIEF; erectile function, orgasm, sexual desire, intercourse satisfaction, overall satisfaction were also found to be comparable (Table 2). Additionally, the PEDT scores were similar between the two groups (Table 1). Finally, the mean Beck depression scores were also comparable between the groups and found within the normal range (Table 1).

Discussion

We have found that circumcision during the phallic period does not negatively affect the psychosexual functions in adulthood. Erectile function, premature ejaculation and depression scores were found to be comparable between circumcised men during phallic and nonphallic periods.

According to Freudian psychology, the instinctual libido develops in five stages. Those are the oral, anal, phallic, latent and the genital phases, which are considered to be the different erogenous zones during the development of a child (Freud, 1991). It has been proposed that in the phallic period between 3 and 6 years, the genitalia of the child become the erogenous zone. During this period, the child becomes aware of the physical

Table 1 Comparison of the parameters between the groups

	Group-1 (Phallic period, n = 135)	Group-2 (Non-phallic period, n = 167)	*P*-value
Mean age (year)	34.3 ± 8.6	35.7 ± 6.9	0.41
General/local anaesthesia (n)	2/135	3/167	0.52*
Total IIEF scores	25.1 ± 4.8	25.4 ± 5.6	0.71
PEDT scores	8.2 ± 4.8	8.7 ± 5.4	0.65
Total BDI scores	10.8 ± 10.4	9.8 ± 8.9	0.47

IIEF, International index of erectile dysfunction; PEDT-5, Premature ejaculation diagnostic tool; BDI, Beck depression inventory.
*Kruskall–wallis test.

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Table 2 Comparison of the subdomains of International index of erectile function (IIEF) between the groups

	Group-1 (Phallic period, *n* = 135)	Group-2 (Non-phallic period, *n* = 167)	*P*-value
IIEF-EF	20.6 ± 1.4	20.8 ± 1.2	0.76
IIEF-OF	8.3 ± 0.7	8.3 ± 0.6	0.64
IIEF-SD	8.7 ± 0.5	8.6 ± 0.9	0.48
IIEF-IS	10.2 ± 0.6	10.5 ± 1.0	0.74
IIEF-OS	8.6 ± 0.7	8.3 ± 0.5	0.94

IIEF, International index of erectile function; EF, erectile function; OF, orgasmic function; SD, sexual desire; IS, intercourse satisfaction; OS, overall satisfaction.

differences between male and female. Therefore, it has been suggested that any genital frustration may result in psychosexual alterations in adulthood. This subject has become a myth and still affects the suggestions of the physicians about the appropriate age at circumcision. However, the evidence is seriously lacking and mostly anecdotal.

Sexual effects of circumcision have been the subject of numerous publications to date. However, rather than the future effects of the childhood circumcision on sexuality, adult circumcision was highlighted in the majority of studies (Collins *et al.*,2002; Fink *et al.*,2002; Senkul *et al.*, 2004; Bleustein *et al.*, 2005; Masood *et al.*, 2005). Short-term changes in the erectile functions, ejaculation pattern and penile sensitivity were the main subjects investigated. Rather than giving a certain conclusion, the results are indeed controversial and increasing the discussion about adult circumcision. On the other hand, Aydur *et al.* (2007) were the first to prospectively analyse the relationship between childhood circumcision and sexual functions. In that study, 107 subjects with a mean age of 30 were divided into three groups (infancy, preschool, childhood) according to the age at circumcision. Finally, they concluded that there was no difference regarding the overall sexual functions between the three groups. In our study, different than in the other studies, we focused on the phallic period which is considered to be the origin of psychosexual behaviours of males. We tried to elucidate the future effects of phallic phase circumcision using three validated questionnaires. Finally, we did not find any significant worsening in the psychosexual functions in adulthood. We believe that the large number of the participants and the use of the validated questionnaires make our study a valuable contribution to the existing literature.

The association of between circumcision and premature ejaculation is also a dilemma. This subject was intensively investigated after adult circumcision. Waldinger *et al.* (2005) reported that adult circumcision resulted in premature ejaculation, leading to insufficient sexual satisfaction of the couples. Another study on the same topic reported delayed ejaculation just after adult circumcision (Senkul *et al.*, 2004). On the other hand, information on long-term ejaculatory effects of childhood circumcision is lacking. Aydur *et al.* (2007) reported that childhood circumcision did not affect the ejaculatory patterns. A recent study reported that the prevalence of premature ejaculation is higher in men who were circumcised after the age of 7 years (Cüceloğlu *et al.*, 2012). However, the low number of the participants and the investigation of premature ejaculation with a subscale of a questionnaire instead of PEDT or IELT are the limitations of the study. In our study, we have investigated this topic in 302 men with a validated questionnaire, PEDT. We found that the PEDT scores in adulthood were similar between the phallic and nonphallic period circumcision.

Another important subject after childhood circumcision is the psychological effects. Castration anxiety or post-traumatic stress disorders have been reported in the short-term (Cansever, 1965; Kennedy, 1986; Yilmaz *et al.*, 2003). In particular, the phallic period was reported to be the critical period, and therefore avoidance of circumcision was advocated during this development phase in those studies. The long-term psychological effects of circumcision are unknown and only a subject of few studies (Goldman, 1999; Hammond, 1999; Ringert *et al.*, 1999; Boyle *et al.*, 2002). Hammond (1999) reported that shyness, fear of razz and distrust to the physicians may be the reasons for this situation. However, the long-term psychological effects of circumcision are really difficult to establish and making a certain conclusion is not wise in this multifactorial topic. In our study, we investigated the psychological status of the participants using a validated questionnaire, BDI. We found that the depression scores in adulthood were similar between the phallic and nonphallic period circumcision.

One of the drawbacks of our study is the lack of a detailed psychological evaluation of the participants. Although we could be able to assess the depression scores of all subjects, it could have been superior if we were able to evaluate the whole psychological status of the participants with other objective screening tools. However, after asking three validated questionnaires including 41 questions, we did not want to increase the number of questionnaires, which might have led to less acceptance of the study. Therefore, we have opted not to apply any more questionnaires. Frankly, we think that at least we could be able to appropriately assess the depression status of the subjects with an objective screening tool, which is an important part of the psychology of males.

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Conclusions

The results of this comparative study demonstrates that circumcision during the phallic period does not negatively affect the psychosexual functions in the adulthood. We found that erectile function, premature ejaculation and depression scores were comparable between circumcised men during phallic and nonphallic periods. To our knowledge, this is the first study investigating future psychosexual functions after phallic phase circumcision using validated questionnaires.

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