

Testicular prostheses: effects on sensual confidence

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ABSTRACT

Objective: Testicular implants were presented to improve impaired physical self-confidence of the patients due to lack of testicles. The evaluation of the pediatric population who underwent gonadectomies with or without testicular prostheses placement has not been sufficient so far regarding body image perception, psycho-social interactions with their peers, male friends, and intimate partners through distinctive functional stages in their lifespans. With this study, we aimed to reveal and analyze the experiences of our patients with testicular implants in terms of self-esteem, concerns and complaints during their social and sexual interactions across the passage from childhood to adulthood.

Materials and Methods: The medical records of the pediatric patients who underwent testicular prostheses insertion were examined retrospectively. The questionnaire titled "The Physical and Emotional Evaluation of Testicular Prosthesis Implanted Patients" was sent to each patient and completed surveys were received by post.

Results: Eleven pediatric patients received 18 testicular prostheses. The median age of the patients at time of the procedures was 17 years old. Eight of the patients accepted to participate the study and completed the questionnaire. All patients agreed that chance of providing the normal appearance of scrotum was important. Four patients found their prostheses improper compared to normal ones. Two patients expressed discomfort during their sexual experiences which resulted in shame in one and no effect in the other patient.

Conclusions: Emotional status of the children with testicular prostheses needs to be studied separately and in a more detailed way according to their different developmental stages. The necessary support that would be given by child and adolescent psychiatrists before and after the implantation may improve the psycho-social status of the patients. The patients and their families should be informed properly about the advantages and probable early and late psycho-social consequences of the implants.

Keywords: orchiectomy, testicular prosthesis, children, self-esteem, sexual health

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INTRODUCTION

Testicular implants were introduced to improve impaired physical self-confidence of the patients due to lack of testicles following gonadectomy operations. Absence of the testicles may disrupt the body image perception of the school age boys among their peers and furthermore may cause psycho-social problems in social interactions and intimate relationships with their male friends and sexual partners especially throughout adolescence and young adulthood period [1-4]. However, placement of an artificial object might result in good or bad consequences with the start of sexual life of the recipients despite having aesthetical enhancement.

Quite adequate data is present regarding the patients who had their orchidectomies and testicular implants in adulthood period reporting good implications on body image perception and self-confidence, and no undesirable effects on their sexual interactions [5-7]. Unfortunately, children who underwent testicular prostheses insertion succeeding gonadectomies due to cryptorchidism, testicular torsion and atrophy, gender re-assignment surgeries in congenital disorders, malignancy and trauma have not been evaluated sufficiently considering likewise impending future problems until recent period. Appreciatively, we have been able to receive some data about patients' concerns and complaints during the transition period from childhood to adulthood in the light of current studies [8,9]. These studies would help recognition of the deficiencies that we can improve through our practices to create more comfortable lifetime for this very specific group of patients.

With this single center study that we previously shared technical details of our testicular prostheses implanted children, we aimed to reveal and analyze the experiences of the study group in terms of self-esteem, concerns and complaints during their social and sexual interactions across the passage from childhood to adulthood [10].

MATERIAL AND METHODS

The medical records of the patients who underwent testicular prostheses insertion were examined retrospectively. The questionnaire titled "The

Physical and Emotional Evaluation of Testicular Prosthesis Implanted Patients" was sent to each patient by post. The patients and/or their parents/guardians who signed the informed consent form completed the questionnaire and sent them back.

This study was approved with application number of 410.01-3287 by Ethics Commission of Hacettepe University.

RESULTS

Eleven pediatric patients received 18 testicular prostheses between 2000 and 2010 at the Pediatric Surgery Department of Hacettepe University Hospital. The median age of the patients at time of the procedures was 17 years old (range: 12-20 years). Gonadectomy indications were bilateral testicular atrophy (n=3), testicular torsion (n=3), female pseudo-hermaphroditism (n=2), mixed gonadal dysgenesis (n=1), unilateral testicular atrophy (n=1), and endodermal sinus tumor (n=1). Bilateral implants were placed in 6 patients and one patient received a third implant with the need of a revision. Silicone gel-filled (n=6) and saline-filled (n=5) testicular implants were used regarding the material of the implants, and there was no information available for 7 prostheses.

Eight of the patients accepted to participate in the study and completed the questionnaire. The age distribution of the patients when they fill in the questionnaire was <15 years old (n=2), 15-24 years old (n=5), and 25-34 years old (n=1). All patients agreed that the chance of providing a normal appearance of their scrotum was important. Four patients denoted that they found their prostheses inappropriate. One patient stated that his prosthesis was harder, smaller, rounder, and more inferiorly located than normal testis. Other patients reported that their prostheses were harder and smaller (n=1), harder and bigger (n=1), and harder (n=1) compared to normal ones (Table 1).

Seven patients including three cases who thought that they had unsuitable prostheses expressed their overall contentment and found implantation advisable for the similar patients. They phrased that they would like to have new prostheses in case of any implant damage.

Two of the patients were sexually active. One of them affirmed no problem derived from the implant during his sexual activity even though he thought that his implant was smaller and harder compared to his normal testis. The other patient expressed his sense of shame about his smaller, harder, inferiorly located and round shaped prosthesis during his sexual experience.

The questions included in the questionnaire and distribution of the answers are listed at Table 2.

DISCUSSION

The absence of the testicles for males has been considered as mirroring of the absence of the breasts or uterus in females [11]. Testicular and breast implants were presented in the context of the necessity to improve self-confidence of this group of patients about their physical appearance. Although both genders are affected profoundly by the disrupted body image and/or fertility concerns, the male side of the story has not been evaluated detailed enough. Furthermore, the present limited literature related to the male gender predominantly covers the adult patients or examine the child, adolescent and adult patients altogether [2-8,11-23]. The assessment of the pediatric population who underwent gonadectomies with or without testicular prostheses placement starting from very early ages has not been sufficient so far regarding body image perception, patients' relationship with their peers, male friends and intimate partners passing through distinctive functional stages in their lifespans. Undeniably, the overlooked sufferings of these patients with the lack of knowledge might cause inferiority complex and social isolation resulting from impaired body image perception and subsequently might interrupt the critical physical, psychological and sexual developmental phases by aging [14-16].

The overall complaints of the patients with testicular prostheses can be listed as inappropriate size, shape, firmness, weight, feeling cold to touch, chronic pain, positioning superiorly or inferiorly, and fixed status/immobility of the implants compared to the present or observed normal testis. The stiffness of the implants has been described as the most frequent problem which was too firm to touch [1,3-9,11,12,14,16]. Araújo et al. reported that 96.1% of their patients felt comfortable with their implants according to the analysis of 51 patients including mostly adults. Additionally, 94.1% of those patients stated that they would have the same surgery in case any damage happens to their implants [8]. Studies have revealed that gonadectomy patients with implants showed better confidence in their intimate relationships and about changing their clothes in the public places despite no statistical significance in comparison to gonadectomy patients without prostheses [1,8,12,21,22]. Four of the patients in our study complained about their prostheses as being harder, smaller, bigger, rounder in shape and positioning too much inferiorly compared to their normal testes. Seven out of 8 patients in our study involving three cases with complaints expressed overall satisfaction about their prostheses and found implantation advisable for the similar patients. They also affirmed that they would like to have new prostheses in case of any complications which conclude with implant removal. Consistent with the several readings, the material used in the production of the implants either being silicone gel-filled or serum saline-filled did not make any impact addressing the cause of the complaints in our limited experience [1,8,12,13,20-24].

According to the literature, adolescent, young adult and adult patients have also specified intense anxiety before and during their sexual intercourses especially at time of the first experience [7,12,15,18-19]. Zilberman et al. reported no sexual interaction related problems with the questionnaire applied on 19 pediatric and adult patients with testicular

Table 1. Patients with complaints about their testicular prostheses

Patient	Complaints	Implant type	Unilateral/Bilateral implants	Sexual life
1	Harder, smaller, rounder, more inferiorly located compared to his other testis	Serum saline-filled	Unilateral	Sexually active with low self-esteem
2	Harder, smaller compared to his other testis	Serum saline-filled	Unilateral	Sexually active with confidence
3	Harder, larger compared to his other testis	Silicone gel-filled	Unilateral	-
4	Harder compared to his other testis	Silicone gel-filled	Unilateral	-

Table 2. The questionnaire and the distribution of the answers.

Questions		Answers	Results		
			a	b	c
1	How did you decide for prosthesis implantation?	a – my own decision b – by help of my family	4	4	
2	Is it important for you to have a physical appearance with 2 testicles?	a – very important b – important c – not important	5	3	
3	Do you think it is important to know the chance of having testicular prosthesis insertion after gonadectomy?	a – yes b – no	8		
4	Does your prosthesis disturb you physically?	a – yes b – no	2	6	
5	Please describe your thoughts about your prosthesis.				
	A. About Size	a – too small b – normal c – too big	2	5	1
	B. About Weight	a – too light b – normal c – too heavy		8	
	C. About Shape	a – normal b – abnormal	6	2	
	D. About Position	a – normal b – abnormal	5	3	
	E. About Consistency	a – normal b – abnormal	4	4	
6	Is there any change in your feelings about your body image after prosthesis insertion?	a – I feel extremely better b – I feel better c – no change	2	2	4
7	Is there any change about your self-confidence after prosthesis insertion?	a – I feel extremely more confident b – I feel confident c – no change	2	1	5
8	How do you feel being in public baths?	a – no problem b – No problem if I change my clothes in another room c – I feel uncomfortable and do not go such places.	4	1	3
9	How do you feel around females?	a – no problem b – I usually abstain from close contacts c – I feel uncomfortable	4	1	3
10	Have you ever had sexual relationship?	a – yes b – no	2	6	
11	Have you experienced any problem about your prosthesis during sexual relationship?	a – yes b – no	1	1	
12	Do you feel comfortable with your decision of prosthesis insertion?	a – yes b – no	7	1	
13	Do you advise testicular prosthesis insertion to the patients with the similar problems?	a – yes b – no	8		
14	Would you want reimplantation if any harm happens to your prosthesis that would cause removal of it?	a – yes b – no	8		

implants [1]. Araújo et al., Catanzariti et al. and Turek et al. reported no erectile dysfunction in the presence of the prostheses [8,19,22]. Researchers also surveyed the association between the motivation to receive an implant and the status of marriage or steady intimate relationship and found controversial results such as less determination or no influence [8,9,13,20,25]. Two of our patients expressed discomfort during their sexual experiences thinking about their unfitting implants which resulted in shame in one and no effect in the other patient.

Chantzi et al. reported supportive data to the current literature in their recent article including number of 16 pediatric patients with testicular prostheses and emphasized the importance of the problems that might occur during adolescence and young adulthood with the start of intimate relationships. The authors underlined the requirement of analyses made by validated questionnaires in the assessment of these patients stating their study's weakness as using the one prepared by the research team [9]. We also think that it is one of the limitations of our study that we conducted our own questionnaire which was specifically prepared for this research besides our small sized study group. Undoubtedly, surveying with the validated questionnaires for psychological and sexual problems is the best way of scientific practice and enables the homogenization, combination and comparison of the limited data coming from different study groups to achieve more precise outcomes with large number of patients.

Testicular prosthesis insertion requires attention regarding lifelong functional effects on psycho-social and sexual interactions of the recipients but a standard procedure with possible surgical complications. Pediatric patients and their caregivers should be informed properly in a detailed and age specific manner. Demonstration of an implant sample prior to the operation would help significantly for the realistic expectations of the patients in terms features of the implants with the sense of touch [9,13,15]. Patients with the prostheses which were inserted in their early childhood necessitate regular controls consistent with their significant physical, psychological and sexual developmental stages to cover the demand

of support needed. A special consideration should be given, and availability of an expert assistance should be offered throughout the transition period of these patients from childhood to adulthood. None of the patients in this study searched for psychiatric support but stated that they wish they were informed more precisely pre- and post-operatively and be followed more frequently in the long-term period.

CONCLUSIONS

There is not enough data about psycho-social status of the patients before and after testicular implantation to assess the short and long-term effects of the prostheses. Emotional status of the children with testicular prostheses needs to be studied in a more detailed way and separately from the adult patients according to their different developmental stages. The necessary support that would be given by child and adolescent psychiatrists before and after the implantation may improve psycho-social status of the patients with a plan of testicular prosthesis insertion. The patients and their families should be informed properly about the advantages and probable early and late sensual consequences of the testicular prosthesis implantation.

Author contribution

Study conception and design: NÇ; data collection: NÇ; analysis and interpretation of results: NÇ; draft manuscript preparation: NÇ, MEŞ and SE. All authors reviewed the results and approved the final version of the manuscript.

Ethical approval

The study was approved by the Hacettepe University Ethics Commission (Protocol no. 410.01-3287/29.12.2010).

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Conflict of interest

The authors declare that there is no conflict of interest.

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