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Ventral Phalloplasty: A Trial to Improve Satisfaction of Penile Length Perception Post-Penile Prosthesis Implantation

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Abstract

Introduction: Patient's dissatisfaction about penile length and faulty perception of penile shortening is considered as one of the main complaints of the patients who underwent penile prosthesis implantation.

Aim of Study: To improve patients' satisfaction about their penile length after semi rigid penile prosthesis implantation by undergoing ventral phalloplasty.

Patients and Methods: Our study included twenty-two patients who attended to the andrology outpatient clinic during their follow-up visits after penile prosthesis implantation. Those patients were dissatisfied about their apparent penile length. All of them were scheduled for ventral phalloplasty after proper counseling of the patient about the expected outcome of this procedure and all possible complications. In addition, patients' satisfaction was assessed using 5-points Likert scale pre-operatively and 2 weeks, 3 months post-operatively. Also, the penoscrotal junction to glans tip length was measured pre and post-operatively to measure the percent of newly exposed ventral penile shaft skin.

Results: Showed that patients' satisfaction was significantly improved post-operatively (p-value 0.001). Concerning the post-operative complication; only one case had ecchymosis, one skin dehiscence, and one superficial skin infection.

In conclusion, ventral phalloplasty is considered to be safe, none time consuming surgical technique, with minimal post-operative complications that improves the patients' satisfaction about their penile length after penile prosthesis implantation.

Key Words: *Patients' satisfaction – Penile length perception – Penile prosthesis – Penoscrotal web – Ventral phalloplasty.*

Introduction

PENILE Prosthesis Implantation (PPI) is a surgical intervention that is considered to be a well-established and effective procedure for treatment of many erectile dysfunction patients who are refractory to other treatment modalities either oral or intracavernosal therapies [1]. In general, PPI is a safe procedure with minimal post operative complications; however some intra operative and post-operative complications. Intra operative complications include; perforation (anterior, posterior or cross perforation), urethral injury, injury of the device and difficult or even failed implantation of the rods due to extensive fibrosi. On the other hand postoperative complications include; haematoma formation, infection (either superficial wound infection or infection of rods), mechanical failure, protrusion, erosion and deformity (S-shaped or Concorde syndrome [2].

Concerning patients' satisfaction postoperatively, it has been reported to be high and durable. However, some patients may concern about post PPI shortening of the penis, in addition to well documented loss of length from the causes of impotence [3]. In addition, patients' perception of decreased penile size after PPI may negatively influence overall satisfaction and quality of sexual life. It has been found that patients' satisfaction after the operation depends on the proper pre-operative counseling and explanations of all facts related to PPI. Thus, if this was not complete or clear, the patient may have unrealistic expectations and frustrations [4].

Several penile lengthening techniques have been tried to increase the apparent phallic length including; supra pubic liposuction or lipectomy, suspensory ligament release, penile disassembly and ventral phalloplasty [5]. Ventral phalloplasty is by far the simplest, safest and less time consuming procedure compared to the other techniques. Ventral phalloplasty is commonly practiced in

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pediatric surgery for correction of webbed penis. In addition, it is a widely used cosmetic procedure for penile lengthening in adults.

Here in our study, we performed ventral phalloplasty as a simple and safe approach in patients who underwent PPI and complained of short penile length in their follow-up visits to improve satisfaction and perception of penile length.

Patients and Methods

Our study was conducted at Andrology Outpatient Clinic at Kasr Al-Ainy Hospital during the period of January 2014 to February 2015 and started with 100 patients who were dissatisfied of their penile length after PPI. After proper counselling and evaluation both clinically and psychologically to exclude dysmorphophobia; only twenty two patients were included.

All included patients were subjected to full history taking, general and clinical examination. In addition, psychiatric assessment was conducted to exclude any psychic disorder or dysmorphophobia. Proper pre-operative counseling and explanation was done explaining the patient expectations, the expected outcome and possible post-operative complications. Finally, informed consent was obtained according to the ethical committee requirements in our institution and the patients were scheduled for ventral phalloplasty to improve perception of penile length.

Fig. (1): Measuring technique assessing erect penile length, length between penoscrotal junction to glans tip.

The scrotal skin was incised using a scalpel from both sides, then dartos muscle was opened by diathermy and the web was excised, this produced a diamond-shaped defect with the penoscrotal angle as the midpoint. Proper hemostasis was done to guard against hematoma formation. Finally, closure was completed in the midline in two-layered fashion with absorbable sutures. The deep layer was closed using a running 4-0 vicryl suture and a running 3-0 vicryl sutures for the skin. Specifi-

Pre-operatively, intravenous prophylactic antibiotics were administered two hours prior to the procedure to guard against the prosthesis infection. Proper sterilization of lower abdomen, genitalia, and perineum was performed and surgical drapes were applied. Local infiltration anesthesia of the scrotal skin was achieved using a combination of Xylocaine 2%/Bupivacine 0.5%.

Traction of the scrotum in the midline was performed allowing determination of the extent and severity of the penoscrotal web along the median raphe. In our experience there is great variability in the position of penoscrotal junction; some webs were very generous while others were less appreciable, commencing near the base of the penis. A checkmark-shaped landamrk (an asymmetric V-shape incision, longer in the inferior or caudal segment to minimize the presence of redundant skin at the time of closure) was made on each side of the web (Fig. 1).

This modification prevented the formation of a “dog ear”-type deformity of the wound after surgery. Technically, one arm of the incision paralleled the axis of the penile shaft from the tip of penoscrotal attachment point till the apparent root of the penis. Careful attention was made not to make this side of the incision too close to the shaft of the penis leaving one finger breadth to allow adequate skin on either side for tension-free closure. The other arm of the incision was extended beneath the web, defining the redundant scrotal tissue that would be excised (Fig. 2).

Fig. (2): Modified check mark to avoid dog ear in scrotal wound.

cally in the portion over the penoscrotal angle where the most wound tension is expected. On discharge of the patient, instruction of wound care was given including removal of the dressing on day 3 post-operatively followed by daily dressing for the remainder of a week.

Patients were followed-up for two weeks for care of the wound and postoperative pain which was managed by daily amoxicillin/clavulanic acid to guard against skin infection and on demand oral NSAIDs analgesics. In addition, patients were advised not to resume sexual activity until a minimum of three weeks after confirmation of complete ventral penile skin healing so as to prevent wound infection and skin dehiscence.

Two weeks, one month and three months post-operatively five-point Likert scale was used to assess degree of satisfaction about perception of penile length, they were asked to assess their satisfaction about penile length while standing in front of a mirror by side view. At the end of third month, we measured apparent ventral penile length from new penoscrotal junction to tip of the glans.

Results

Our study included twenty-two patients who underwent PPI previously and presented to our outpatient clinic in the follow-up visits complaining of dissatisfaction about their apparent penile length. Concerning the length of the previously implanted rods of PPI, the mean implanted semi rigid rod length was 17 ± 1 and the mean penile length using a ruler was 13.4 ± 1.0. On the other hand, the mean length of ventral penoscrotal junction to glans before phalloplasty was 7 ± 1.2cm which increased to a mean length of 12.4 ± 1cm.

Comparing the mean values of penoscrotal junction to glans length (cm) measured before and after operation in studied patients, our results showed that the mean length before operation was 7.0 ± 1.2 and after operation was 12.4 ± 1.0 and that showed statistically significant change in length of penoscrotal junction to glans (p-value 0.001).

Concerning the patients' satisfaction assessment using Likert satisfaction scale before and after the operation in different times, the following table summarizes the results (Table 1).

The following Table shows comparison between median values of patients' satisfaction measured before operation and after 2 weeks, one and three months of operation. There was significant improvement in patient's satisfaction about their penile length post-operative (p-value 0.001).

Figs. (3,4): Pre and post ventral phalloplasty

Table (1): Patients satisfaction profile pre and post-operative.

	Before operation	After 2 weeks	After 1 month	After 3 months
Severely unsatisfied	7.0 (31.8%)	0.0 (0.0%)	0.0 (0.0%)	0.0 (0.0%)
Unsatisfied	15.0 (68.2%)	1.0 (4.5%)	1.0 (4.5%)	1.0 (4.5%)
Intermediate	0.0 (0.0%)	4.0 (18.2%)	2.0 (9.1%)	2.0 (9.1%)
Satisfied	0.0 (0.0%)	15.0 (68.2%)	16.0 (72.7%)	13.0 (59.1%)
Very satisfied	0.0 (0.0%)	2.0 (9.1%)	3.0 (13.6%)	6.0 (27.3%)

Discussion

Dissatisfaction about penile length is a common complaint at sexology clinics. Procedures and devices claiming to enhance penile size are being widely advertised. Lack of standardization of controversial procedures aiming at increasing penile size has led to a variety of poorly documented surgical techniques with unconvincing results [6].

Patient's perception of decreased penile size after PPI can negatively influence overall satisfaction and quality of sexual life. Strategies to preserve and potentially increase penile size are of great importance to all implanters. Various techniques to increase apparent phallic length have been described [7].

Historically, our technique has evolved from the treatment of the webbed variant of inconspicuous penis as described in the pediatric literature. Several methods have been described to release the penis. An early, simple technique involved vertically excising the redundant, high insertion scrotal skin along the ventral aspect of the shaft including a portion of the scrotum. This produced a diamond-shaped defect with the penoscrotal angle as the midpoint. The wound could be approximated in various ways, most often longitudinally [8].

Our study was conducted at Andrology Outpatient Clinic at Kasr Al-Ainy Hospital during the period of January 2014 to February 2015 and started with 100 patients who were dissatisfied of their penile length after PPI. After proper counselling and evaluation both clinically and psychologically to exclude dysmorphophobia; only twenty two patients were included.

All our 22 patients with recent penile prosthesis implantation, were highly satisfied post phalloplasty. Also Miranda [9] showed significant satisfaction when performed concomitant ventral phalloplasty with penile prosthesis implantation (36 patients satisfied from 43), on the other hand the other group who were served only by penile implantation, 31 of 37 patients complained of small penile size post-operative.

Nikos [10] in a study over 7 years carried on 82 patients in which 35 patients served with ligament dissection with inverted VY plasty, and the other 43 patients served with ligament dissection through subcoronal circumcision wound, their study showed poor satisfaction rate (61% poorly satisfied), they referred that to frequent complications of their procedure of lengthening.

Ventral phalloplasty and scrotoplasty technique is considered to be very simple, minimally invasive with mean operative time of 21 minutes in our study, also Miranda [9] in their study found it is only approximately 12 minutes longer to add this technique concomitantly with penile prosthesis implantation.

In contrast, other penile lengthening procedures are time consuming, ligament dissection combined with suprapubic lipectomy needed mean operative time of 115 minutes in a study by Spyropoulous [10], and 125 minutes in a study by Nikos [11] who performed suspensory ligament dissection through circumcision wound.

In contrast to Nikos [11] who carried their study on 82 patients, 79 of them were penile dysmorphophobics which may be the result of poor satisfaction rate post-operative (61% poorly satisfied), and Li [12] which showed 35% overall satisfaction and 27% satisfaction among dysmorphophobics.

Conclusion:

Ventral phalloplasty is a safe, technically simple and none time consuming procedure that may be performed in cases of patients' dissatisfaction about the apparent penile length post PPI after excluding psychic illness or dysmorphophobia.

Conflict of interest:

No conflict of interest to be declared by the authors.

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محاولة تحسين مستوى الرضا عن طول القضيب بعد إجراء جراحة زراعة دعامة بالقضيب من خلال القيام بجراحة تجميلية لجلد القضيب وكيس الصفن

تعتبر شكوى عدم الرضا عن طول القضيب من آهم الشكاوى فى عيادات الصحة الجنسية، خاصة من الحالات التى قامت مؤخرا بزراعة جهاز تعويضى بالقضيب.

تهدف هذه الدراسة إلى تحسين مستوى الرضا عن طول القضيب من خلال القيام بجراحة تجميلية لجلد القضيب وكيس الصفن.

وقد تمت الدراسة على ٢٢ مريض من الذين يترددون على عيادة طب وجراحة آمراض الذكورة بمستشفيات كلية الطب، جامعة القاهرة، ممن يشتكون بعدم الرضا عن طول قضيبهم بعد إجراء جراحة زراعة دعامة بالقضيب.

بعد فحص التاريخ الطبى والفحص الإكلينيكى، تم إجراء الجراحة بإستخدام التخدير الموضعى بعد موافقة المريض وتوقيعة على إقرار بذلك.

وقد جاءت النتائج كالتالى:

- زيادة ذات دلالة إحصائية فى درجة رضى المرضى عن طول وشكل العضو الذكرى قبل وبعد إجراء الجراحة.
- وآن هذا التحسن فى مستوى الرضا يتناسب طرديا مع النسبة الزائدة التى تمت إظهارها من جلد القضيب.

تعتبر تلك العملية آمنه وتستغرق معدل ٢١ دقيقة مع آقل نسب للمضاعفات بعد العملية.