Ukrainian Journal of Nephrology and Dialysis
Scientific and Practical, Medical Journal

Founders:
- State Institution «Institute of Nephrology NAMS of Ukraine»
- National Kidney Foundation of Ukraine

ISSN 2304-0238;
eISSN 2616-7352 **Journal homepage: https://ukrjnd.com.ua**

Clinical Case Report

Muhammad Izzuddin Hamzan, Mohamad Jeremi Jeffrey, Ahmad Sukari Halim

doi: 10.31450/ukrjnd.1(65).2020.02

Illicit Penile Augmentation: A Short Review in a Single Institution

Hospital Universiti Sains Malaysia and School of Medical Sciences, Universiti Sains Malaysia

Citation: Hamzan MI, Jeffrey MJ, Halim AS. Illicit Penile Augmentation: A Short Review in a Single Institution. Ukr J Nephr Dial. 2020;1(65):7-12. doi: 10.31450/ukrjnd.1(65).2020.02

Abstract. *Illicit penile augmentation is thought to be a common practice in Southeast Asia. This article aimed to explore the demographics of the patient who had illicit penile augmentation, its complications, surgical methods employed for removal as well as the long-term outcome following treatment, specifically on sexual satisfaction.*

Method. Records of patients with a penile foreign body to the Reconstructive Science Unit were retrieved. Demographics, presenting symptoms, surgical methods and outcomes were recorded and analyzed.

Results. A total of 14 patients was identified. The median age at implantation and duration is 36 years old and 48 months respectively. The penile subdermal injection was the sole method utilized with the use of liquid silicone in 7 patients. Constant pain, painful erection, and discomfort were common symptoms (42.8%). All patients underwent surgical excision followed with either native (penile skin) full-thickness skin graft (FTSG), distant donor FTSG or primary closure. Five out of 7 patients report improved sexual satisfaction post-surgery.

Conclusion. This report demonstrated two groups of men with distinct age, duration of implant and possibly differing motivation for penile augmentation. The various complications presented stem from inflammation and scarring. Distant FTSG donor has a superior take rate compared to native FTSG. Long term outcome following treatment on sexual well-being is generally good. Illicit penile augmentation is generally unsafe, however, a large-scale study is required to establish the prevalence of the practice.

Keywords: *penile augmentation, silicone injection, penile foreign body.*

Article history:
Received December 23, 2019
Received in revised form January 09, 2020
Accepted January 14, 2020

Conflict of interest statement: all the authors declared no competing interests.

Correspondence should be addressed to Ahmad Sukari Halim: ashalim@usm.my

УДК: 616.66

М. Хамзан, М. Джефрі, А. Халім

Незаконне збільшення статевого члену: досвід одного центру

Лікарня та Школа медичних наук Університету Малайзії

Резюме. *Вважається, що незаконне збільшення статевого члена є звичайною практикою в Південно-Східній Азії. Ця стаття мала на меті вивчити демографічні показники пацієнтів з незаконним збільшенням статевого члену, його ускладнення, хірургічні методи, які використовувались для видалення, а також довгострокові результати лікування, зокрема щодо сексуального задоволення.*

Методи. До дослідження включено медичну документацію 14 пацієнтів з чужорідним тілом статевого члена, які перебували на лікуванні у відділенні реконструктивної хірургії. Демографічні показники, клінічні симптоми, хірургічні методи лікування та його результати, були проаналізовані.

Результати. Середній вік пацієнтів на момент імплантації склав 36 років, тривалість постімплантаційного періоду становила 48 місяців. Підшкірна ін'єкція силікону була використана у 7 пацієнтів, 6 пацієнтів не освідомлені, який матеріал був імплантований. Дискомфорт, постійний біль та болючисть під час ерекції були загальними симптомами у 42,8% пацієнтів. Усім пацієнтам було проведено хірургічне висічення з наступною нативною (шкіра статевого члена) або ненативною трансплантацією шкіри, первинним закриттям. Після операції 5/7 пацієнтів повідомили про покращенння сексуальне задоволення.

Висновки. У цьому повідомленні продемонстровано дві групи чоловіків різного вік, тривалістю постімплантаційного періоду та, можливо, різною мотивацією до збільшення статевого члена. Описані ускладнення є наслідком запалення та рубців. Довгостроковий результат після лікування статевого самопочуття був задовільним. Незаконне збільшення статевого члену, як правило, небезпечно, однак для встановлення поширеності цієї практики потрібні масштабні дослідження.

Ключові слова: *збільшення статевого члена, введення силікону, чужорідне тіло.*

Introduction. Despite the general notion that the practice is common, the actual prevalence of men who underwent illicit penile augmentation is unknown. Published prevalence rate are taken mostly from studies involving a highly specific group of men [1] (e.g. prisoners, patients in STD clinics, drug abusers), hence does not reflect the population in general. These men are usually made known to healthcare when they present with the resultant complications. Considering the amount of published paper, the practice appears to dominate in Southeast Asia (90%) [2]. The lack of data concerning illicit penile augmentation is apparent locally in Malaysia, as the literature review yielded 4 case reports with a total of 5 patients [3–6].

The practice varies in its methodology according to region. More common locally, subdermal injection of various liquids is performed either to increase the penile girth or to create a firm irregular surface. It is more often than not performed by unqualified personnel in a non-sterile setting, utilizing non-medical grade materials and instruments.

Professor Dr Ahmad Sukari Halim
ashalim@usm.my

While there are no reports on the long-term outcome following surgical treatment for complications arising from illicit penile augmentation, studies have demonstrated generally good sexual satisfaction in adults who have undergone a similar degree of surgical dissection of the penis in childhood [7]. Numerous encouraging factors have been defined in diverse cultures [2] (e.g. sexual enhancement, bringing luck, group association, a symbol of potency), however, none have been reported in the general Malaysian population.

This article aimed to explore the demographics of the patient who had illicit penile augmentation, its complications, surgical methods employed for removal as well as the long-term outcome following treatment, specifically on sexual satisfaction.

Methods. Records of all patients presented with a penile foreign body to the Reconstructive Science Unit, Hospital Universiti Sains Malaysia from the year 2000 to 2018 was retrieved. Information pertaining to demographics, as well as the various aspect of augmentation was recorded in a proforma. Patients were contacted by telephone, and with explicit verbal consent, were interviewed to assess outcomes following treatment. No specific tools were used to assess sexual satisfaction; patients were asked if they were satisfied with their sexual well-being after implantation and after its removal.

The resulting data were then analyzed using Microsoft Excel version 16.17.

Results. A total of 14 patients presented with complications following illicit penile augmentation from the year 2000 to 2018 (Table 1).

Table 1

Background of patients presenting with complications following penile augmentation

	Median (Lowest, Highest)	Mean
Age at Presentation, years (min, max)	50 (27,65)	47.5
Age at Implantation, years (min, max)	36 (15,56)	37.0
Duration of Implantation, months	48 (8, 600)	95.7

One patient had a documented long-term follow-up. Six patients were contactable for an over-the-phone interview. When the patients are divided into groups according to the presence or non-presence of co-morbidities, the age distribution follows the expected pattern whereby younger patients tend to be in the healthy group and older patients tend to be in the morbid group. However, it is interesting to see that between these 2 groups, the median duration of implantation is markedly different (Table 2).

Table 2

Duration of implantation between healthy and morbid patients

	Healthy Patients	Morbid Patients
Median Age at Implantation, years (min, max)	30 (21,56)	48 (15,55)
Median Duration of Implantation, months (min, max)	12 (8,120)	72 (48,600)

All patients in this series had a subdermal injection of various materials for penile augmentation. In half of the cases (7 cases), liquid silicone was used for augmentation. Collagen was used in a single case and 6 patients did not know what material was used (Fig. 1).

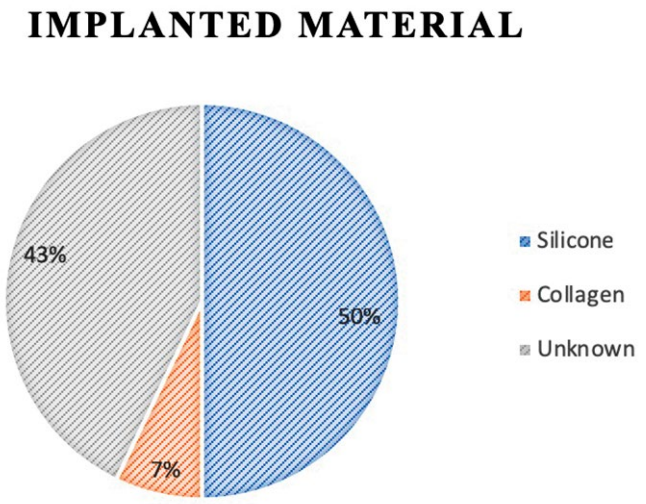

Fig. 1. The material used for penile implantation.

Forty-three percent [6] of the patients complained of either constant pain, painful erection or discomfort. Ulceration and anatomical distortion were reported in 21% [3] of patients. Migration of injected material and scarring each was reported by one patient. Two patients presented with no symptoms, one seeks removal due to partner discomfort, and another due to religious view (Table 3).

Table 3

Complication Rates

Symptoms Following Implantation	% (No. of Cases)
Constant Pain	42.8% (6)
Painful Erection	42.8% (6)
Discomfort	42.8% (6)
Penile Ulceration	21.4% (3)
Anatomical Distortion	21.4% (3)
Extensive Scarring	14.2% (2)
Implant Migration	7.1% (1)
Pain Ejaculation	7.1% (1)
Erect Length shortening	7.1% (1)
Partner Discomfort	7.1% (1)

All patients underwent surgical removal of the offending material. Ten patients had their wound closed with native (penile) skin full-thickness graft (FTSG) (Table 4).

Table 4

Surgical Methods and Complication Rates

Excision in combination with:	Post-operative complication
Native skin full-thickness graft (10 patients)	Graft failure in 50% (5)
Distant skin full-thickness graft (2 patients)	Nil
Primary closure (2 patients)	Nil

Two patients had FTSG harvested from a distant donor site (inguinal region). Remaining 2 patients had their wound closed primarily. Fifty percent [5] of native FTSG was complicated with graft failure, of which, 2 patients require repeat surgery with FTSG harvested from a distant donor site. One patient required repeat excision of remaining injected material. One patient developed hematoma following excision requiring surgical exploration.

Eleven patients underwent penile augmentation with the expectation of having a larger penis. Two patients underwent augmentation to enhance sexual experience and in one patient, to reduce wrinkles over penile skin. Five out of 7 patients claimed improved sexual satisfaction after the excision of the injected material. One patient complained of erectile dysfunction immediately following excision, and another reported pre-mature ejaculation due to allodynia over the grafted area causing performance anxiety.

Discussion. When sorted into the presence of co-morbidities or none, the patients in this series form two very distinct groups of men, especially when a comparison is made on the mean duration of implantation. While it is expected that patients with no co-morbidities tend to be of a younger age, the mean duration of implantation is significantly shorter than those in the middle-aged and older men with co-morbidities. One explanation for the contrasting duration of implantation is that, in the background of a conservative culture and lack of formal sexual education, adventurous young men may seek penile augmentation out from misperceptions induced via various means. As the outcome of the augmentation was unsatisfactory, these men seek early surgical intervention.

While most of the literature [2] including this review described a younger age group at which penile augmentation was performed, this series also captures a group of morbid men who had it done in their middle-age and older; likely due to different reason. As erectile dysfunction is communal in aging Malaysian men with co-morbidities [8], these men may have a certain degree of erectile dysfunction. The avoidance

to express this concern – a subject of embarrassment, to their physicians, may have led these men to undergo illicit penile augmentation with the pretext of "penile enhancement" to self-treat their condition.

The prevalence of the practice could not be determined in this review as it consists of patients who presented themselves to the healthcare service and therefore does not represents the general population. This review likely only reveals the tip of the iceberg of men who have had illicit penile augmentation, either with or without complications. A large-scale screening program for illicit penile augmentation will not only gauge the prevalence of the practice accurately, but it will also open up the possibility to explore the motivation and concerns of these men while addressing the concerns and curb this unsafe practice.

The wide range of complications observed in this series stems from common pathophysiology; inflammation and the scarring that it ensues. While silicone, the material used in 50% of the patients in this series, is non-toxic, inert and non-immunogenic, these features are only seen in a highly purified form [**9**]. Additives in the injected silicone, as well as other materials used in illicit penile augmentation, triggers an intense inflammatory response that facilitates its breakdown and removal from the body. Apart from its cardinal signs, this intense inflammatory response causes surrounding tissue damage, leading to skin ulcerations. In its further persistence following acute inflammation, a dense fibrous capsule is formed by fibroblasts around the foreign body, causing significant scarring of the surrounding tissue. This then leads to distortion and shortening of the penis as well as painful erection. The role of highly purified, liquid injectable silicone (LIS) in penile augmentation, however, cannot be discounted. Yacobi et al [**10**] in 2007 has demonstrated in 324 subjects, that when performed by trained personnel, medical-grade LIS can be applied for penile girth augmentation without any complications in the first 20 months. It is however by far the only literature that supports its use, and the long-term outcome has yet so far remained unknown.

While the placement of incisions and exact technique of excision varies between patients in this series, the principles of the surgery remain the same; removal of the offending material and scar tissue, resurfacing of ulcerated skin and closure of wound while maintaining normal penile anatomy. Extensive dissection of scar tissue and injected materials frequently devitalize the overlying skin. This devitalized skin is then used as a full-thickness skin graft (native FTSG) for wound closure. However, half of the native FTSG in this series did not take (5 patients). Two of which required second surgery with FTSG harvested from a distant donor site. The poor take rate of native FTSG may be due to that its normal histology has been distorted by scarring due to prior inflammatory insult and lost its normal blood supply architecture, preventing it to take by the means of plasmatic imbibition and capillary inosculation. It is therefore recommended, from the results of this study, to harvest a distant FTSG, if required for wound closure, instead of converting the overlying penile skin into FTSG which may have been scarred by chronic inflammation.

Five out of 7 our patients reported satisfactory outcomes following surgery. This is defined by being able to perform sexual intercourse satisfactorily, with adequate erection and free from pain. One patient reported having erectile dysfunction following surgery – this particular morbid and elderly patient presented with no symptoms, requesting for excision of the injected material due to religious belief. There is a likelihood that in this patient, the perceived penile erection prior to removal was a result of the augmentation itself, and that he may have erectile dysfunction long before the surgery (see discussion on demographics). A second patient reported allodynia over the grafted portion of the penis, causing premature ejaculation. This could be treated non-invasively with desensitization therapy. With further follow-up, the concerns brought upon by the two dissatisfied patients can potentially be addressed, and therefore surgical removal of the injected material, followed with wound closure either primarily or with FTSG harvested from the distant donor site is recommended for patients who present with complications following illicit penile augmentation.

Conclusions. This series demonstrated two groups of men with distinct age, duration of implant and possibly differing motivation for penile augmentation. The various complications presented stem from inflammation and scarring. Distant FTSG donor has a superior take rate as compared to native FTSG. Long term outcome following treatment on sexual well-being is generally good. This series adds to the body of evidence that illicit penile augmentation is generally unsafe. However, a large-scale screening study is required to ascertain the prevalence of the practice.

Declaration of patient consent. The authors certify that they have obtained all appropriate patient consent forms. Names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship. There are no financial support and sponsorship directly or indirectly.

Conflicts of interest. There are no conflicts of interest.

Contribution. All authors contributed to the design and concept of the research, preparing and writing the manuscript and analyzing, reviewing and approving the write-up.

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