

# Reawakened Sexual Interest: The Result of Surgical Correction of Concealed Penis

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## Abstract

Concealed penis (CP) is a developmental anomaly in which the penis is hidden in the skin of the abdomen, thigh or scrotum. As a result of this, the penis appears shortened in length. It was first described by Keyes Jr. E.L. in 1919. It can be associated with voiding problem and in adults, sexual issues, among others. **Objective:** To show that surgery can reverse celibacy induced by CP and highlight the need for an interdisciplinary approach to correction of this anomaly. **Patient and Method:** A thirty-one-year male patient who had a surgical release of his buried penis by two surgeons in 2019 in a private hospital. The case note was reviewed, the data obtained analyzed and the results including photographs, were presented. The patient was followed up. **Result:** A 10 cm length of penis and a hundred percent (100%) take of sheet of split skin graft used to resurface the denuded penis were achieved using combined spinal and epidural anesthesia. The patient, his mother and the surgeons were satisfied with the outcome. Consequently, he resolved to marry a wife after all. **Conclusion:** Concealed penis can now be regarded as a known cause of celibacy and surgical correction can reverse the celibate state.

## Keywords

Reawakened, Sexual Interest, Concealed Penis, Celibacy, Surgical Correction

## 1. Introduction

Concealed penis (CP) is a developmental anomaly in which the penis is hidden in the skin of the abdomen, thigh or scrotum. As a result of this, the penis appears small in length and infantile even at full erection. It was first described by

Keyes Jr. E.L. in 1919 [1] and it is not a common condition. The prevalence of concealed penis is not fully known but it is said to be about 3.7% in Japanese new born infants [2]. Terminologies which have been used by various authors to describe the same condition include: concealed penis [3], buried penis [1], congenital megaprepuce [4], and inconspicuous penis [5]. It is expedient to differentiate concealed penis from trapped penis which is defined as a condition in which the penis becomes inconspicuous secondary to a cicatricial scar, usually after an overzealous circumcision [6]. In terms of the different forms in which concealed penis can present, Casale *et al.* [7] classified it into three types: Type 1; Congenital concealed penis, Type 2; Concealed penis, Type 3; Complex cases involving excessive obesity. On the other hand, Chin & Co [8] classified congenital buried penis into three groups: A, B, and C, based on the ratio of the penile skin to that of the penile shaft (S/P ratio). As a result, group A, B and C has severe, moderate and mild or no deficiency of the penile skin, respectively. Some complications associated with it include, but not limited to, balanitis, voiding without wetting cloth in an erect position, and in adults, sexual problems such as poor penetration, sexual embarrassment, loss of interest in sexual activity which was the prevailing situation in this index case leading to a state of celibacy. Tai-Wai Chin [9], in his Mini-review of Buried penis, showed that the surgical procedure for treatment of Buried penis involves basically: 1) denuding the penis, 2) releasing the skin and the subcutaneous tissue from the corpora, 3) releasing any band of dysplastic tissues tethering the penis and 4) reconstructing the penile skin. He equally revealed that various experts have employed various techniques in reconstructing the penile skin, e.g. multiple Z-plasties, Island pedicle flap from the inner prepuce, Preputial unfurling to cover the shaft of the penis after release from tethering. We therefore described the surgical correction of a concealed type 3 penis in an obese and depressed young man which contributed to changing his sexual interest and producing a fulfilling lifestyle.

## 2. Patient and Method

### 2.1. Methodology

The patient's case note was retrieved and reviewed. The data including history, physical examination and preoperative investigation findings, the anesthesia, operative technique and postoperative outcome including the patient's attitude towards interest in sexual activity were analyzed and the results presented and discussed. These together with the drawbacks encountered were presented, including some photographs for elucidation.

Informed consent was also obtained from the patient.

### 2.2. Patient

This is a case of a thirty-one-year old single male who had a surgical release of his buried penis in 2019 by two surgeons (Plastic/Reconstructive surgeon and Urologist). This was done under combined spinal and epidural anesthesia given by a consultant anesthesiologist. He complained of a small penis resulting to lack

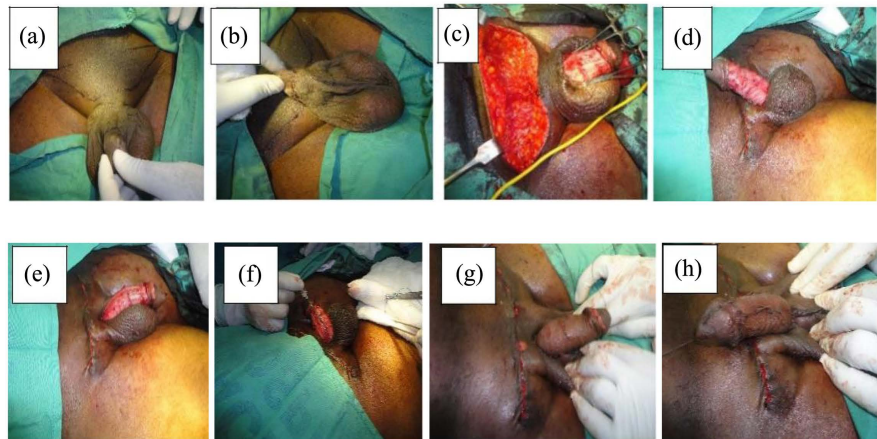
of interest in and desire to sexual activity. He made a few attempts to engage in sexual conduct with females prior to presentation but got put off when his partners made comments about the small size of the organ. His orientation was heterosexual. He chose to remain celibate due to the embarrassment from the apparent short length of his penis, for his age. He was obese with the body mass index (BMI) of 39.3 Kg/m<sup>2</sup> {height = 1.95 m, body weight = 149.3 Kg} and had a circumcised penis with an apparent length of 4 cm, a bridging scar on the dorsal glans area obliterating the coronal sulcus and no phimosis or balanitis. There was abundant scrotal skin attached to the distal penile shaft ventrally causing an apparent foreshortening of the shaft (which was readily palpable in its entire length) and made even more so by protuberant excessive mons pubic fat pad dorsally (**Figure 1**). The significantly deficient dorsal skin was not freely mobile over the shaft. Both testes were palpably normal in location and size. There was moderate (grade II) bilateral gynaecomastia [10]. Though not a known hypertensive, the blood pressure was found to be elevated during the preoperative visit and was controlled with oral anti-hypertensive pills before the procedure. He was counselled regarding the investigations and the surgical option of correction. His blood glucose level (5.6 mmol/L), serum urea, electrolytes and creatinine, hormone profile and hemoglobin (12 g/dl) and ECG were essentially within the normal range. A combined team of plastic & reconstructive surgeon, urologist and anesthetist reviewed the patient and planned for elective surgical correction.

### 2.3. The Surgical Technique

Having obtained informed consent, and using the combined spinal and epidural anesthesia technique, the following surgical steps were carried out: 1) following skin marking (**Figure 2(a)** and **Figure 2(b)**), a circumferential incision made 0.5 cm proximal to corona and the bridging scar was divided and a ventral midline longitudinal incision made down to the penoscrotal junction, then the underlying fibrotic Dartos fascia which prevented the penis from being mobilized was completely released and excised with a resultant penile (post-release) length of 10 cm (**Figure 2(f)**), 2) the residual stump of the Dartos fascia was anchored to the symphysis pubis at 11 and 1 O'clock, to the Buck's fascia at 3 and 9 O'clock and 5 and 7 O'clock positions at the penoscrotal junction using polyglactin 3/0 suture, 3) excisional lipectomy of suprapubic fat pad using an inverted truncated



**Figure 1.** (a)-(c) External genitalia showing concealed penis (a), lateral view showing bridging scar and pronounced suprapubic fat pad (b), ventral view showing abundant scrotal skin attached to the distal penile shaft (c).

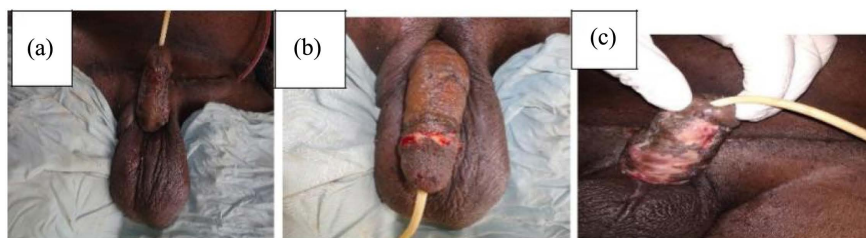


**Figure 2.** (a)-(h): Skin markings for suprapubic fat pad excision (a), releasing incisions (a) and (b), post-suprapubic fat pad excision defect (c), released, closed suprapubic wound (d) and (e), denuded penis 10 cm long (f), released penis covered with sheet of SSG (g) and (h).

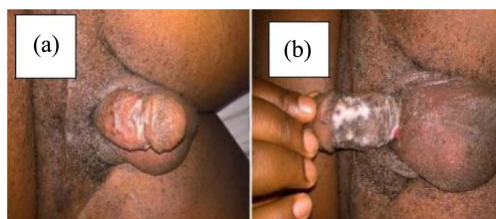
cone shaped incision (**Figure 2(a)** and **Figure 2(c)**) and subdermal anchoring of the of the superior skin flap to the rectus abdominis fascia at the midline as advocated by Alter and Ehrlich [11] using polypropylene 2/0 suture and the wound closed in layers over an active (JP®) drain (**Figure 2(h)**), 4) the median raphe of the scrotum reapproximated to its normal anatomical position at the base of the penis (**Figure 2(d)** and **Figure 2(e)**), 5) sheet of split thickness skin graft harvested from the anterolateral thigh was used to resurface the released denuded penile shaft (**Figures 2(g)**) and 6) penile splint was applied over the dressed graft.

### 3. Result

The released penis, in flaccid state, was 10 cm long (**Figure 2(f)**). Upon induction of artificial erection, the length was 14 cm and maintained a straight outline (no curvature). The Dartos fascia was cicatricial and particularly adherent to the underlying Buck's fascia especially in the dorsal surface of the penis. The thickness of the suprapubic fat pad was about 6 cm. The graft take by the 3<sup>rd</sup> day postoperatively was 100% (**Figure 3(a)** and **Figure 3(b)**). The patient and his mother were happy and satisfied with the outcome. The surgery lasted for about four and half hours. He received anti deep vein thrombosis (subcutaneous enoxaparin in the initial days on admission, and later oral dabigatran. He was discharged by the second week postoperatively to continue wound care on outpatient basis and by sixth week, the skin graft was still intact and consolidated and the penile length was still maintained and there was no curvature (**Figure 4(a)** and **Figure 4(b)**). He was scheduled to be followed up to 5 years, but he was lost to follow up at 3 years, by the team. Complications encountered were those seen in the early postoperative period and included partial graft loss (about 5%) in the ventral surface of the penis, mild wound dehiscence at the penoscrotal junction (**Figures 3(a)-(c)**). They were sorted out with wound care and antibiotic



**Figure 3.** (a)-(c): 3<sup>rd</sup> day postop: Graft take is 100%, dorsal surface (a), ventral surface (b), 7<sup>th</sup> day postop: epidermiolysis at the ventral surface, (c).



**Figure 4.** (a) and (b) 6 week Postop dorsal (a) and ventral (b) surfaces: length maintained.

therapy. Mild lymphoedema observed regressed spontaneously as the patient was reassured. Initial evaluation on follow-up revealed good cosmetic outcome and fairly satisfactory erection function and improved mood. His interest in heterosexual activity was reawakened.

#### 4. Discussion

Psychological and social trauma associated with concealed penis seen in obese boys include ostracization by their peers and their subsequent withdrawal socially [6]. The index patient took a decision to remain celibate to avoid embarrassment due to the short length of his penis even during erection which he experienced normally. He was taunted by his peers in childhood. He did not believe the problem could be solved and kept it to himself. His condition was brought to our attention by his worried mother when he became ripe for marriage but declined any such union. His interest in heterosexual activity was reawakened following surgical correction of his condition. In the part of the world where the patient came from (Nigeria), it is desirable thing for parents particularly mothers to see their male children marry when they are presumed to be ripe for that. For a mother to watch her educated working class son who is of age not doing anything concerning marriage, is usually of a big concern to her. Concealed penis is often seen in neonates or prepubertal obese boys, not excluding adults. It is said that cases that are not very obvious in children may become so and diagnosed in adulthood, when increased deposition of fat in the suprapubic region makes it much more a problem [6] and this was believed to be the case with our patient who had a pronounced suprapubic fat pad. Morbid obesity has been found to play a role in the genesis of concealed penis, though it is not seen in all cases [12] [13]. To wait for an obese patient to lose weight before

surgical intervention for concealed penis can be a daunting task for the surgeon and frustrating to the patient because the central and suprapubic areas of the abdomen are mostly affected in men and rarely respond to weight loss [13]. King *et al.* from their observation which included a review of the literature stated that obesity should not delay surgical intervention for this anomaly [14]. For us, the challenge of anesthesia for the obese is unique and the choice of a satisfying technique to suit the surgical correction of concealed penis was guided by such factors such as the surgical site, the patient (obese), and obviously the duration of surgery. The combined spinal technique (that is epidural and subarachnoid space block anesthesia) was chosen to confer the advantages of adequate surgical anesthesia/analgesia and safety for the obese in resource limited setting. The tumescence caused by the spinal anaesthesia [15] helped in ensuring that an appropriate size of skin graft was used to cover the penis compare with that which would have been used if the penis were in its flaccid state which would obviously restrict the penis during erection. The pathophysiology of concealed penis is still not clear but many theories regarding the cause have been proposed by many investigators, but currently it is proposed to be due to a failure of separation of the planes of migration in the developing male external genitalia, and this causes a persistence of adhesions between the planes [16]. This also causes insufficient attachment of the Dartos fascia and the penile skin to the underlying Buck's fascia [17]. With this pathology in mind the cicatricial Dartos fascia has to be completely released and excised and the stump anchored as described above to avoid it holding the penis as was done in this case. According to King *et al.* [14], this step and suprapubic lipectomy or panniculus adiposus excision add to the operation time as it has been found that if lipectomy is not needed, it takes on average 2.6 hours to complete the surgery by most surgeons, however, when fat excision is involved, it takes an average of 3.8 hours, which is not quite different from ours (4.5 hours). Thorough understanding of the anatomy of the penis and scrotum is needed before embarking on this challenging surgery. Both plastic surgeon and urologist operating together on a patient with concealed penis will do nothing but improve the surgical outcome. Anchoring the stump of the Dartos fascia at the above stated positions helps to ensure that the penis does not migrate to either the scrotal skin or pelvis afterwards. Ventrally, the anchoring should not be at 6 O'clock position to avoid injury to the urethra within the corpus spongiosum. Patient or the parents should be educated preoperatively that wound healing may be delayed and the expected loss of sensation on the skin graft and the need to encourage erection to minimize graft contraction. Sexual intercourse should not be encouraged before six weeks even when the healing is completely achieved before then, in order to ensure graft consolidation.

#### **Limitation of the Study**

The follow up to confirm the actual sexual activity and marriage has been poor due to "apparent" residual psychological issues surrounding his premorbid condition, *i.e.*, he was very withdrawn.

## 5. Conclusion

Concealed penis can now be regarded as a known cause of celibacy and surgical correction can reverse the celibate state. The surgical management should be a multidisciplinary approach and preferred before adolescent age. Though surgical correction of this anomaly can be challenging, but the outcome can be quite satisfying.

## Patient's Consent

Was sought and obtained before the photographs were taken.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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