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Distal Hypospadias, Treated or Untreated? A Case Report

Agus Santosa*
Universitas Muhammadiyah Purwokerto, Indonesia
Corresponding author: agussantosa@ump.ac.id

ABSTRACT
Background: Treatment for distal hypospadias is a controversy among the experts. Some argue that it does not require any surgery if it does not interfere with the patient's urinary and sexuality.
Purpose: This study aimed to determine whether patients with distal hypospadias need treated or untreated.
Methods: The method used is a case study. Participants in this study is a 10-year-old male with distal hypospadias—location of the study in Purwokerto city, Banyumas district, Central Java. Participants were interviewed and physically examined by a doctor and nurse. The results of interviews and physical examinations are recorded and analyzed based on a literature review to determine the decision, treatment, or untreated.
Results: A 10-year-old patient with hypospadias and the pediatric urologist do not give surgery advice, because the urethral opening is still close to the glans penis, and there are no symptoms of urinary dysfunction.
Conclusion: Patients with distal hypospadias may be untreated as long as they do not interfere with urinary function.

Keywords: Child, Hypospadias, Urologists, Sexuality, Reconstructive Surgical Procedures.

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BACKGROUND

Hypospadias is a congenital abnormality at birth, where the urethral opening's location is below the penis (Djakovic, Nyarangi-Dix, Ozturk, & Hohenfellner, 2008). Around 70% of hypospadias identified are the distal hypospadias (van der Horst & de Wall, 2017). The exact prevalence of hypospadias in the world is difficult to estimate. A study reported the prevalence of hypospadias in the word 20.9 per 10,000 live births (Yu et al., 2019).

Distal hypospadias is often regarded as "normal function," and the surgery for improvement is still being debated. The goal of hypospadias reconstruction surgery is to improve penis appearance and the urinary function. The reconstruction surgery can be done at any age but is recommended to do in 6-18 months old. As seen as a reasonable condition, the parents usually do not think of any immediate operation; they will then fall to the thought as their child has grown up (Bhandarkar & Garriboli, 2019).

Some opinions of pediatric urologist doctors also confirm that if the hypospadias is not expected to interfere with urination and sexual function, they do not need surgery. Surgery can be considered for cosmetic purposes. The surgery will require the bending of the penis and the presence of disrupting urinary function. It sometimes requires more than a stage. Besides, the artificial urethra can leak (fistula), or scar tissue can appear along the bottom of the penis. As a result, urine leakage can occur, thus needs an additional operation to repair it (Soebadi, 2015).

OBJECTIVE

This study aimed to determine whether patients with distal hypospadias need treated or untreated and what factors are based on a literature review.

METHODS

The method used is a case study. Participants in this study is a 10-year-old male with distal hypospadias—location of the study in Purwokerto city, Banyumas district, Central Java. Participants were interviewed and physically examined by a doctor and nurse. The results of interviews and physical examinations are recorded and analyzed based on a literature review to determine the decision, treatment, or untreated.

RESULTS

A 10-year-old child experienced Hypospadia. A surgical nurse's physical examination revealed that the urethral opening was not at the tip of the penis but the neck of the glans, indicating distal hypospadias (Figure 1). The appearance of the penis is hooded because only the upper half of the penis is covered by foreskin (prepuce). The patient has no complaints of pain or difficulty urinating, but he should lift his penis glans to urinate well. The parents are anxious about their children's future, whether their child will have healthy sexuality, and whether he can still have offspring(s).

The patient advised visiting the pediatric urologist. The result of the examination shows that he has distal hypospadias. He was not advised to undergo hypospadias reconstruction surgery because the urethral opening is still close to the glans penis, and there are no symptoms of urinary dysfunction. Besides, the operations will mean expensive costs and maybe requires two stages of surgery. The doctor argued that his sexual function would be useful, and he would still be able to have children without any surgery performed.

DISCUSSION

Hypospadias is a congenital abnormality at birth, where the location of the urethral opening is below the penis (Djakovic, Nyarangi-Dix, Ozturk, & Hohenfellner, 2008). Based on the position of the meatus, hypospadias divided into distal and proximal (van der Horst & de Wall, 2017). Hypospadias is very easy to detect because its symptoms are very typical. The symptoms are the opening of the urethra in locations other than the tip of the penis, the curve of the penis pointing downwards (chordee), appearance of the penis veil because the foreskin only includes the upper half of the penis, and the urination is not normal (Kraft, Shukla, & Canning, 2010).

Hypospadias is a congenital disorder with multifactorial causes. The genetic factor, prenatally hormonal stimulation, placental, and environmental regarded to be hypospadias. As much as 7% of hypospadias patients have a genetic history (Fredell et al., 2002). The study found that patients with hypospadias had mutations in the genes of WT1, SF1, BMP4, BMP7, HOXA4, HOXB6, FGF8, FGFR2, AR, HSD3B2, SRD5A2, ATF3, MAMLD1, MID1, and BNC2 (van der Zanden et al., 2012). Lack of androgen hormone production, increased estrogen during pregnancy, and placental insufficiency regarded to be a factor in hypospadias (Hsieh, Breyer, Eisenberg, & Baskin, 2008; Sharpe, 2003; Yinon et al., 2010). Environmental variables such as exposure to pollution and chemicals can also increase the incidence of hypospadias (Bouty, Ayers, Pask, Heloury, & Sinclair, 2015).

Purposeful consideration: Cosmetic or Reconstructive

The only hypospadias treatment is reconstructive surgery (Djakovic, Nyarangi-Dix, Ozturk, & Hohenfellner, 2008). There are various reconstructive surgery techniques for hypospadias patients, and they have a success rate (Smith, 1953). Although the surgery need for distal hypospadias is still controversial among the pediatric urologists--whether it is cosmetic or reconstructive surgery--they agreed that surgery has to taken if it interferes with the patient's urinary process (Snodgrass & Bush, 2018). In the case in question, the pediatric urologist does not recommend surgery because the urethral opening is still close to the glans penis. Besides, the patient also does not complain of urinary difficulties or others. Thus, the pediatrician thinks that surgery on distal hypospadias is more cosmetic nature than reconstructive.

Physiological considerations

The hypospadias-affected penis will not develop normally. If the condition not treated, there will be more adverse symptoms. Among them are an abnormal shape of the penis, arduous sexual intercourse, dysuria, strangury, and even urinary incontinence. In such a situation, surgery will be urgently required (Keays et al., 2016; Schlomer, Breyer, Copp, Baskin, & DiSandro, 2014; Snodgrass & Bush, 2018).

Consideration of complications

The results of surgery for hypospadias patients are often unsatisfactory, with reported rates of complications reaching 40% and even more (Appeadu-Mensah et al., 2015; Mammo et al., 2018). For distal hypospadias, the highest complication reported reaching 33% (Klijn, Dik, & de Jong, 2001; Stein, 2012). Postoperative hypospadias complications are divided into mild and severe complications. Minor complications include bleeding, hematoma, edema, and severe complications, including wound infection, wound dehiscence, skin necrosis, flap necrosis, fistula, and penile torsion (Agrawal & Misra, 2013; Bhat & Mandal,

2008). Some experts could consider this in deciding either to do a repair operation or not.

Cost considerations

Hypospadias surgery can be performed in a single stage or multiple stages, depending on the method applied, with or without urethral reconstruction (Bracka, 2008; Stein, 2012; Subramaniam, Spinoit, & Hoebeke, 2011). One-stage surgery is a standard practice in the management of distal hypospadias (Badawy & Fahmy, 2013), but a study reports that its success rate is only 55.9% (Mammo et al., 2018). The surgery cost is around the US $ 14,000 (Svensson, Reychman, Troëng, & Åberg, 1997). In Indonesia, the range of its costs is between Rp. 30,000,000-80,000,000 (US $ 2,142-5,714), depending on the hospital rate.

Consideration of sexual function and infertility

A study conducted in adults with distal hypospadias who did not take surgery. It found that they were not interested in corrective surgery. They stated that they remained satisfied with the appearance of their penis, retained normal sexual function, and did not have any infertility problems (Dodds et al., 2008). Another survey result proved contradictory results for those having surgery. A patient with hypospadias who have undergone a surgery claimed dissatisfaction with the penis appearance and size. It also found a decrease in libido after hypospadias repair (Kimihiko et al., 2006). This is likely related to an unfortunate result of cosmetic surgery (Springer, A., 2014). A weak erection and ejaculation are experienced by almost all post-repair hypospadias patients (Singh, Jayanthi, & Gopalakrishnan, 2008). There were no infertility problems found in distal hypospadias, either treated or not (Kumar et al., 2016). The issues only found in those with the proximal type, and they usually have lower fertility (Ortqvist et al., 2017).

CONCLUSION

Patients with distal hypospadias may not be treated as long as it does not interfere with the patient's urinary function. They will have a healthy sex life and have children. The physiological aspect, postoperative complications, and cost factors are more relevant to decision treatment of distal hypospadias than the cosmetic issue.

IMPLICATION FOR NURSING SCIENCE

The role of the nurse as an educator is crucial in this case. Health education for patients and families is essential so that families and patients feel calm.

CONFLICTS OF INTEREST

The author declares no conflict of interest.

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FIGURE CAPTIONS

Figure 1. Distal hypospadias appear