

Comparison of results Between Preputial Buttonhole Flap and Binary Flap in treatment of Hypospadias in Imam reza hospital in Ardabil from 2020 to 2022

Abstract

Background: Hypospadias is one of the most common congenital anomalies defined by abortive development of the urethral spongiosum and the ventral prepuce. The current standard of care for hypospadias includes not only a functional penis adequate for sexual intercourse and urethral reconstruction offering the ability to stand to urinate, but also a satisfactory cosmetic result. The techniques of hypospadias surgery continue to evolve.

Aim: To describe Preputial Buttonhole Flap and Binary Flap techniques in tubularized incised plate urethroplasty and evaluate postoperative outcomes.

Materials and methods: We conducted a study to compare two different methods of skin coverage in hypospadias repair. All 40 cases in our study were repaired by using Snodgrass technique. In 20 cases skin coverage was done using inner Preputial Buttonhole Flap. In another group Binary Flap was used as water proofing layer. The minimum period of follow-up in this series was 6 months. Finally, the data related to the results of the operation and the demographic characteristics of the patients were collected, and analyzed with SPSS software.

Results: The mean and standard deviation of the age of the studied patients were 26.1 ± 8.1 . Based on the results of the present study, there was no statistically significant difference in the comparison of preputial buttonhole flap surgery with binary flap in the treatment of hypospadias in terms of the variables of urethral fistula to the skin and meatal stenosis and repeat surgery after the operation ($p > 0.05$). In distal type hypospadias, the rate of urethral fistula to the skin following buttonhole flap surgery was significantly lower than binary flap ($p = 0.036$). The incidence of fistula following surgery was significantly higher in proximal hypospadias compared to distal hypospadias. The age of the patients who developed urethral fistula to the skin after surgery was significantly higher than the patients who did not suffer from this complication, but the age of the patients who developed meatal stenosis after surgery was not significantly different from the patients who did not suffer from this complication.

Conclusion: We conclude that Preputial Buttonhole Flap may have an edge over Binary Flap for coverage of the neourethra in preventing fistula in distal type hypospadias. In order to provide stronger evidence, more studies with a larger sample size are needed.

Keywords: Hypospadias, Buttonhole Flap, Binary Flap