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Natural history of patients with hypospadias who underwent surgical repair: an observational descriptive analysis with a final surprise

Guido Barbagli, Arezzo, Italy, Salvatore Sansalone, Valerio Iacovelli, Rome, Italy, Francesco Montorsi, Massimo Lazzeri, Milan, Italy*

INTRODUCTION AND OBJECTIVES: Epidemiological data on the relationship between primary hypospadias repair in children and failed hypospadias repair in adult are rarely reported in the literature. We investigated the 'natural history' of patients with hypospadias who underwent surgical repair.

METHODS: This is an observational, retrospective, descriptive survey of patients who were evaluated and treated for failed hypospadias repair in a single reference center to investigate the natural history of patients with hypospadias. From January 1990 to June 2015, 408 patients with a mean age of 34 years (range 4-76) were evaluated and treated. In each case we investigated the type of primary hypospadias (balanic, penile, peno-scrotal), the number of operations needed to repair primary hypospadias, the type of surgeons who performed hypospadias repair (hypospadiologist, pediatric urologist, general urologist, plastic surgeon, other), the stricture site after primary repair (meatus-navicularis, penile, bulbar, panurethral), the number of operations needed to repair failed hypospadias, the total number of operations needed to repair primary and failed hypospadias, and the presence of lichen sclerosus. A descriptive statistical analysis was reported.

RESULTS: The type of primary hypospadias was balanic in 131 (32.1%) cases, penile in 227 (55.6%), peno-scrotal in 50 (12.3%). Number operations (minimum, maximum and mean ± SD) to repair primary hypospadias were as hereunder: balanic 1-10 (1.97 ± 0.96); penile 1-14 (4.08 ± 1.97); peno-scrotal 1-13 (6.2 ± 2.65). Primary hypospadias repair was performed by hypospadiologist in 191 (47 %) cases, pediatric urologist in 148 (36 %), general urologist in 51 (12%), plastic surgeon in 11 (3 %), other in 7 (2 %). Stricture sites for balanic hypospadias were: meatus-navicularis 105 (80.1%), penile 15 (11.4%), bulbar 9 (7%), panurethral 2 (1.5%); for penile hypospadias: meatus-navicularis 39 (17.2%), penile 155 (68.3%), bulbar 21 (9.3%), panurethral 2 (1.5%); for peno-scrotal hypospadias: meatus-navicularis 1 (2%), penile 30 (60%), bulbar 4 (8%), panurethral 15 (30%). Number operations (minimum, maximum and mean ± SD) to repair failed hypospadias were as hereunder: balanic 1-6 (2.20 ± 1.14); penile 1-8 (2.58 ± 1.35); peno-scrotal 1-7 (2.65 ± 1.06). Number operations (minimum-maximum-meanÂ±SD) to repair primary and failed hypospadias were as hereunder: balanic 1-8 (1.96 ± 1.05); penile 1-10 (2.63 ± 1.52); peno-scrotal 1-8 (2.28 ± 1.32). Out of 408 patients, 42 (10.3%) showed histological proven lichen sclerosus.

CONCLUSIONS: Our data showed a high number of repeated operations for patients with hypospadias revealing an unthought-of scenario. No other congenital anomaly of the human body requires so high number of operations to be repaired. Our findings cast doubts about some statements of pediatric urologists about primary hypospadias repair.

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