Discrepant rates of hypospadias surgical complications: a comparison of USNWR, PHIS and published literature.

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COI: None
Background

• Historical hypospadias complication rates
  • Distal hypospadias, 5-10% \((1-3)\)
  • Proximal hypospadias, 12-23% \((3-5)\)

Background

• USNWR
  • Distal hypospadias, <1% (3 pts), 1-3% (2 pts), 3-5% (1 pts), >5% (0 pts)
  • Proximal hypospadias, <5% (3 pts), 5-10% (2 pts), 10-15% (1 pts), >15% (0 pts)
Background

• Contemporary series report higher complication rates
  • Up to ~50%\(^{(6-9)}\)

Aim

• Could data from PHIS corroborate the hypospadias complication rates reconcile the differences between rates reported in the literature and the expectations established by USNWR as quality metrics?
Methods

PHIS? → Hypospadias → Revisions

Distal
54322, 54324, 54326, 54328

Proximal
54304, 54308, 54312, 54316, 54318, 54332, 54336

Group A
- Distal
  54340, 54344, 54348

Group B
- Proximal
  54340, 54344, 54348, 54352

Group A + 50920, 53520

Group B + 53020, 53025, 53450, 53460, 53235, 50920, 53520, 53600, 53601, 53605, 53620, 53621, 54300, 54304, 52275, 52276, 52281, 52283, 52341, 54162, 54163, 52000, 53400

Group C
Methods
Distal revision rate:
- 3.32% (range: 0.48 – 7.36%)
- increased significantly from the USNWR (group A) by inclusion of a more expansive list of CPT codes (group B and C)

Proximal revision rate:
- 12.29% (range: 3.48 – 36.36%)
- difference is not significant when comparing group A vs. B, but it is significant when comparing group A vs. C.
For both distal and proximal hypospadias, the median revision rates increase with longer follow-up from 3 years to 7 years. This is true for all three code sorts; however, the upward trend is not statistically significant.
From 2010-2016 there were 19,931 distal hypospadias and 5,840 proximal hypospadias repairs with 786 distal revisions (median time to revision, 1 year; range 0.75 - 1.91 years) and 590 proximal revisions (median time to revision, 1.08 years; range, 0.88 - 1.67 years).

Adjusting for varying length of follow-up, revision rate increased statistically significantly from the USNWR (group A) by inclusion of additional CPT codes associated with revision procedures (group B and C) in distal and proximal hypospadias.
Conclusions

• Depending on one’s definition and follow-up interval, none of the 29 hospitals studied met the USNWR metrics; the revisions rates following both distal and proximal repairs being higher.