Research Days

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Bar Removal Following Minimally Invasive Pectus Excavatum Repair – Does Removal at 2 Years Affect Recurrence or Satisfaction Rates?

Wendy Jo Svetanoff
Children's Mercy Hospital

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Bar Removal Following Minimally Invasive Pectus Excavatum Repair – Does Removal at 2 Years Affect Recurrence or Satisfaction Rates?

Wendy Jo Svetanoff MD MPH; James A Fraser MD; Kayla B Briggs MD; Pablo Aguayo MD; Charles Snyder MD; David Juang MD; Jason D Fraser MD; Tolulope A Oyetunji MD MPH; Shawn D St. Peter MD

Children’s Mercy Kansas City; University of Missouri Kansas City School of Medicine

**Introduction**

- Pectus excavatum is the most common congenital chest wall deformity.
- During minimally invasive pectus excavatum repair (MIRPE), a bar is placed to correct the deformity.
- The bar normally stay in place for 3 years.
- Little is known about recurrence or cosmetic satisfaction when the bar is removed early.

**Aim**

- Review patients who underwent bar removal less than 3 years after placement:
  - Recurrence Rate
  - Patient Satisfaction

**Methods**

- Retrospective Review with Prospective Follow-up
- Inclusion Criteria:
  - MIRPE between October 2006 – June 2017
  - Had bar removed < 3 years after placement
- Telephone Follow-up
  - Residual Deformity
  - Cosmetic Satisfaction

**Results**

- 44 patients included
  - Haller Index: 4.0 (IQR 3.5, 4.5)
  - Median time at bar placement: 13.3 years
  - Median time to bar removal: 2.1 years

**Post-operative Outcomes**

- Recurrent Deformity: 2
- Required Bracing: 1
- Required Redo Repair: 1
- Bracing for Pectus Carinatum: 1
- Costal Cartilage Resection: 3
- Scar Revision: 1

**Reasons for Early Bar Removal**

- No Reason Identified/ Doing Well: 38.6%
- Over-correction: 11.4%
- Leaving Parents’ Home: 6.7%
- Other: 4.5%
- Infection: 4.5%
- Loss of Insurance: 4.5%

**Telephone Surveys (n=17):**

- Median follow-up: 9 years
- *9 patients (53%) noted residual deformity
  - *2 thought deformity was >25% of chest
  - *1 sought re-evaluation (bracing)

**Patient Satisfaction Rates**

- **VERY SATISFIED** (41%)
- **SOMewhat SATISFIED** (59%)
- **NOT SATISFIED** (0%)

**Conclusion**

- Early bar removal does not increase recurrence rates requiring surgical intervention and maintains good patient cosmetic satisfaction.
- More long-term follow-up information for all pectus patients is warranted.