



# Premature Babies with Inguinal Hernias: When Should we Repair?

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## Introduction

10-13% of premature babies are found to have an inguinal hernia, but the timing of repair of these hernias remains controversial. Data balancing risks of general anesthesia vs. incarceration are not clear. The purpose of this study was to understand outcomes from inguinal hernia repair in premature babies done before or after discharge from the NICU.

## Methods

A retrospective analysis was performed on all babies with an inguinal hernia repair done at a single institution over a 5 year period. Babies with a gestational age at birth < 35 weeks were included. Data regarding clinical course, surgery, and postoperative course were analyzed. Primary outcomes were incarceration and anesthesia related complications. Data was analyzed with the Fischer's exact test and Mann-Whitney U test.

## Conclusions

While there was no difference in recurrence, complications or incarceration rates whether surgery was performed before or after discharge, the operations done before discharge tended to take longer and were associated with prolonged intubation. Despite the retrospective nature of these data, this suggests that delayed repair of inguinal hernias in selected neonates may be warranted.

## Results

Overall, 226 premature babies had an inguinal hernia repair, with a 3.3:1 male preponderance, mean birth weight of 1.24 kg, and mean gestational age of 29.3 weeks. The cohort was divided into before and after discharge groups.

	Before Discharge (n=116)	After Discharge (n=110)
O2 at Surgery (#) p < 0.001*	32	5
Surgery Time (minutes) p = 0.076	112.8	99.5
Delayed Extubation (#) p < 0.001*	17	3
Recurrence (#) p = 0.442	4	2
Incarceration (#) p = 0.413	27	20
General anesthesia (#) p = 0.088	84	68

Babies with hernias repaired before discharge were significantly smaller, more premature, had more comorbidities, and more were on oxygen at the time of surgery. Although their hernias were repaired at a younger age, there was no significant difference in the age of diagnosis between the groups.

Multivariate regression found no factors significant for incarceration, but for anesthesia-related complications, gestational age and age at surgery were significant.