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# Abstract Title: ROLE OF HYPEROSMOLAR CONTRAST - A GAME CHANGER IN PEDIATRIC SMALL BOWEL OBSTRUCTION

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## Aim

To evaluate the diagnostic and therapeutic role of hyperosmolar water-soluble contrast in the management of pediatric post operative small bowel obstruction (SBO), and to assess its efficacy in reducing the need for surgical intervention.

## Purpose and Methods

Seven children, aged 7 months to 12 years, who developed abdominal distension and bilious vomiting between postoperative days 4 and 7, were included in the study. The cohort comprised four patients following appendectomy (for acute, chronic, and perforated appendicitis), two patients after Ladd's procedure for malrotation, and one patient post-laparotomy for spontaneous bacterial peritonitis. All cases were evaluated for postoperative small bowel obstruction and managed using a standardized hyperosmolar water-soluble contrast protocol as part of non-operative management (NOM).


Fig.1


Fig.2

Fig.3


Fig.4

## Results

Each child received an oral dose of Gastrografin, followed by serial abdominal radiographs at 30 minutes(Fig.2), 1 hour, 3 hours (Fig.3), 6 hours, and 12 hours to assess contrast progression. Transient vomiting occurred in five of the seven patients after contrast administration. In four children, contrast stasis was observed within the small intestine up to 6 hours; however, complete passage into the colon was documented in six patients by the 12-hour film. One child experienced recurrent bilious vomiting 12 hours post-contrast (Fig.4), necessitating laparotomy and adhesiolysis, after which recovery was uneventful and discharge occurred on postoperative day 4. The remaining six children improved with conservative management and were discharged within 48 hours of contrast administration.

Conclusion:
Hyperosmolar contrast proved both diagnostic and therapeutic in managing postoperative pediatric SBO, enabling resolution without reoperation in most cases. It offers a safe, effective, and minimally invasive alternative in early management.

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