



**NHS**

Great Ormond Street  
Hospital for Children  
NHS Foundation Trust



OPERATIONS  
AND IMAGES



# Air enema reduction of intussusception: is duration of symptoms a prognostic indicator?

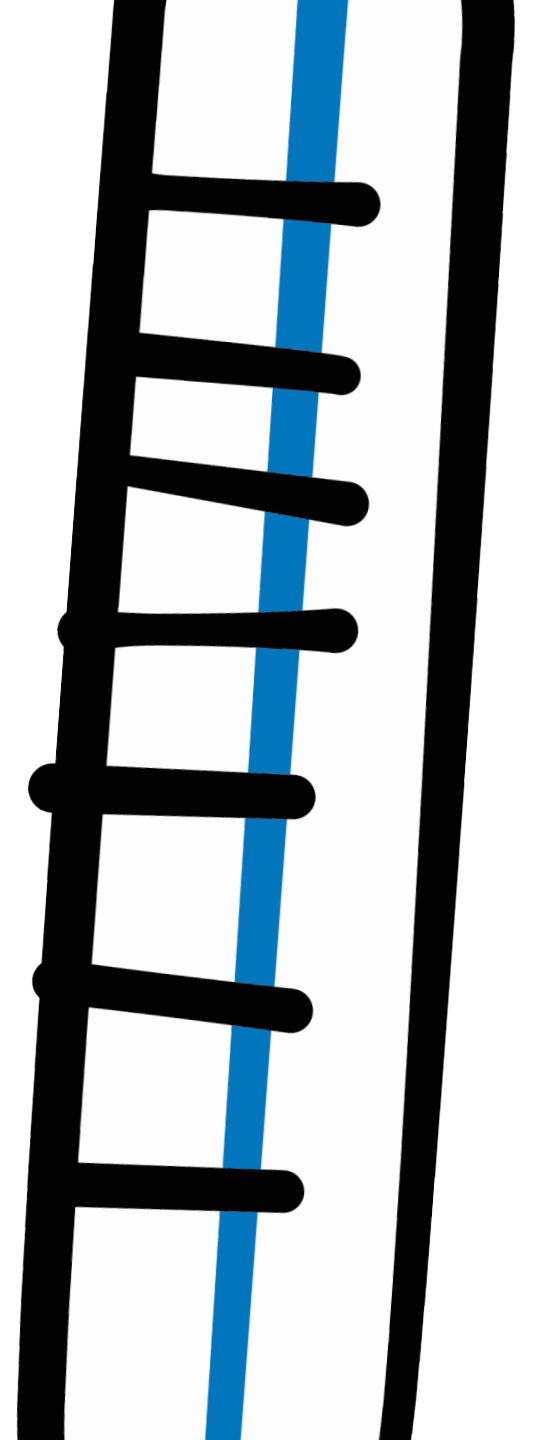
Giuseppe Schillizzi, Aisling Fagan and Tom Watson

ESPR Marseille

08 June 2022

# Background

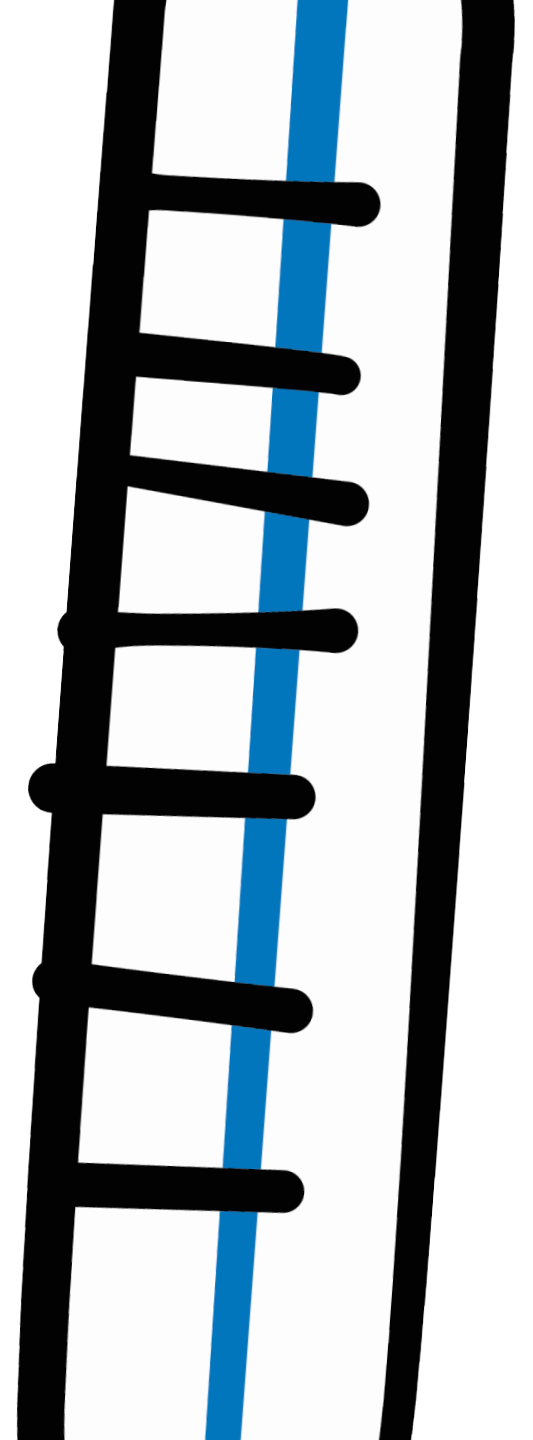
- Intussusception is the most common abdominal surgical emergency in infants and toddlers
- Incidence: 1-4 per 2,000 infants and children.
- If there are no contraindication *non operative* pneumatic or hydrostatic enema can be performed.
- The purpose of this study was to to identify if duration of symptoms are predictive factor for enema reduction outcome.



# Background

## **Pneumatic reduction advantages:**

- cost-effective
- quick to perform;
- lower radiation dose compared with hydrostatic reduction;
- higher success rate.

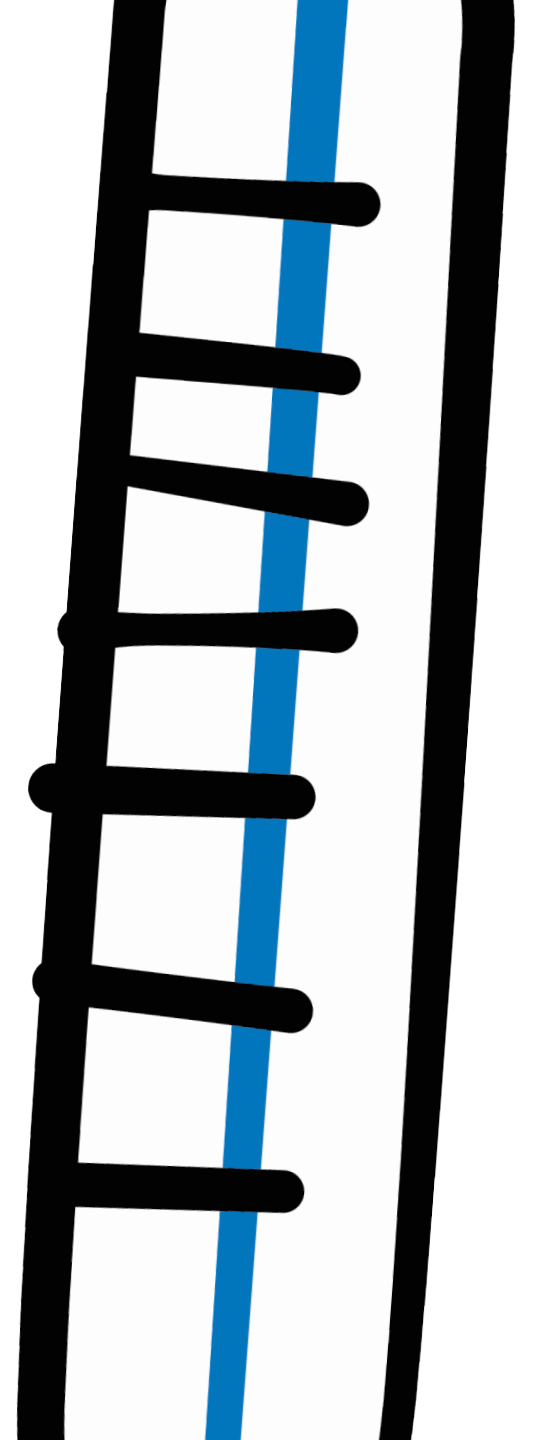


# Background

Duration of symptoms has been reported to be a **significant predictor of outcome.**

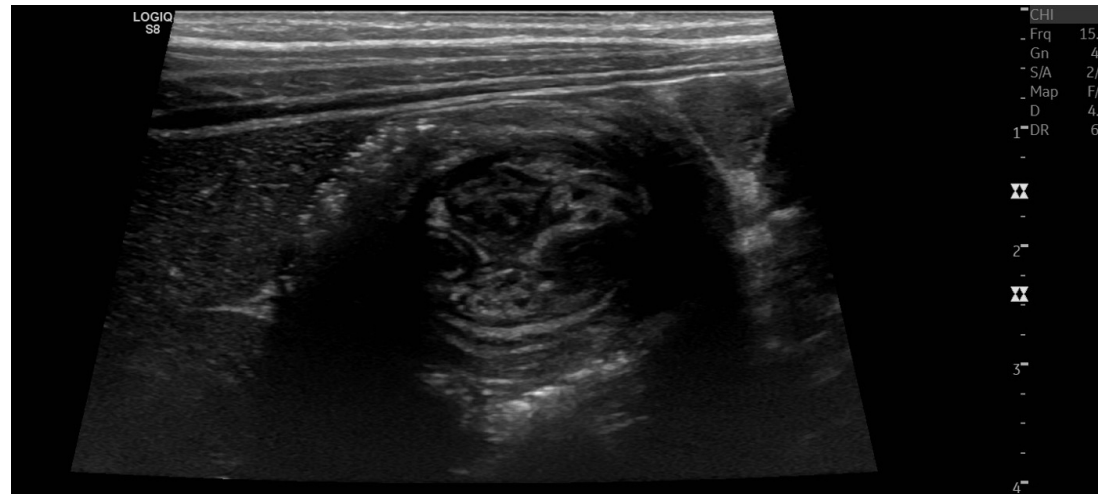


Many authors suggest that duration of symptoms **>48h**  
Should be considered high risk for failed pneumatic  
reduction



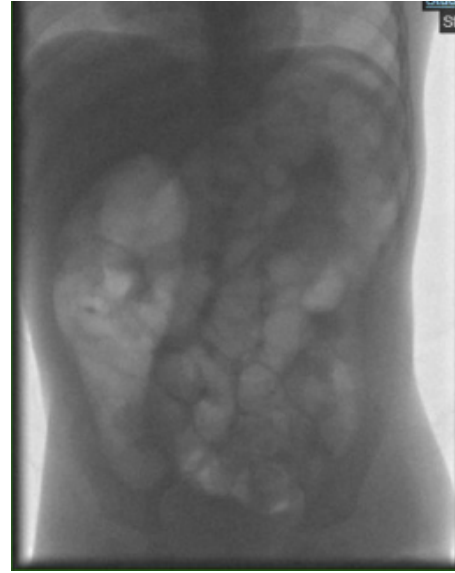
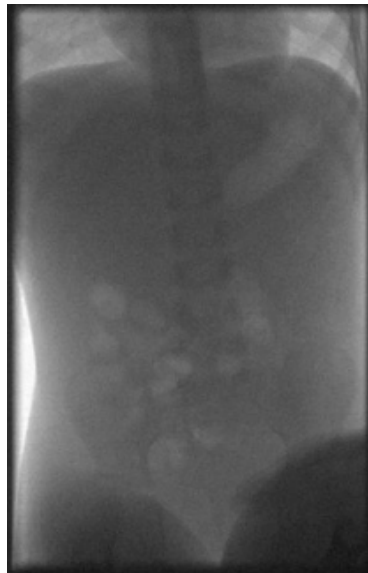
# Methods

- Pneumatic reduction performed between January 2011 to December 2021
- Retrospective analysis of medical records in our database
- BSPR guidelines
- Sedation and antibiotics not routinely used.



# Methods

- The criteria for successful reduction was demonstrated fluoroscopically with reflux of air into the small bowel.



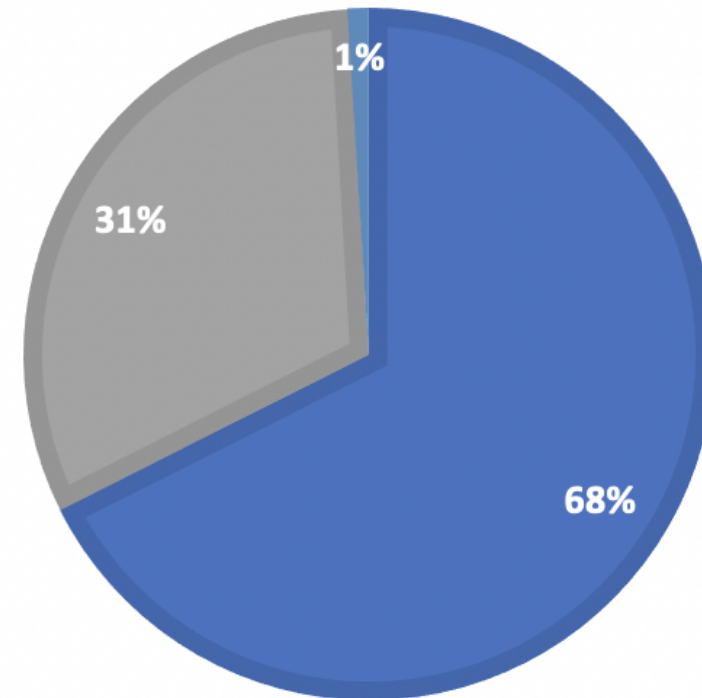
- All patients in whom pneumatic reduction failed underwent surgery.

# Results

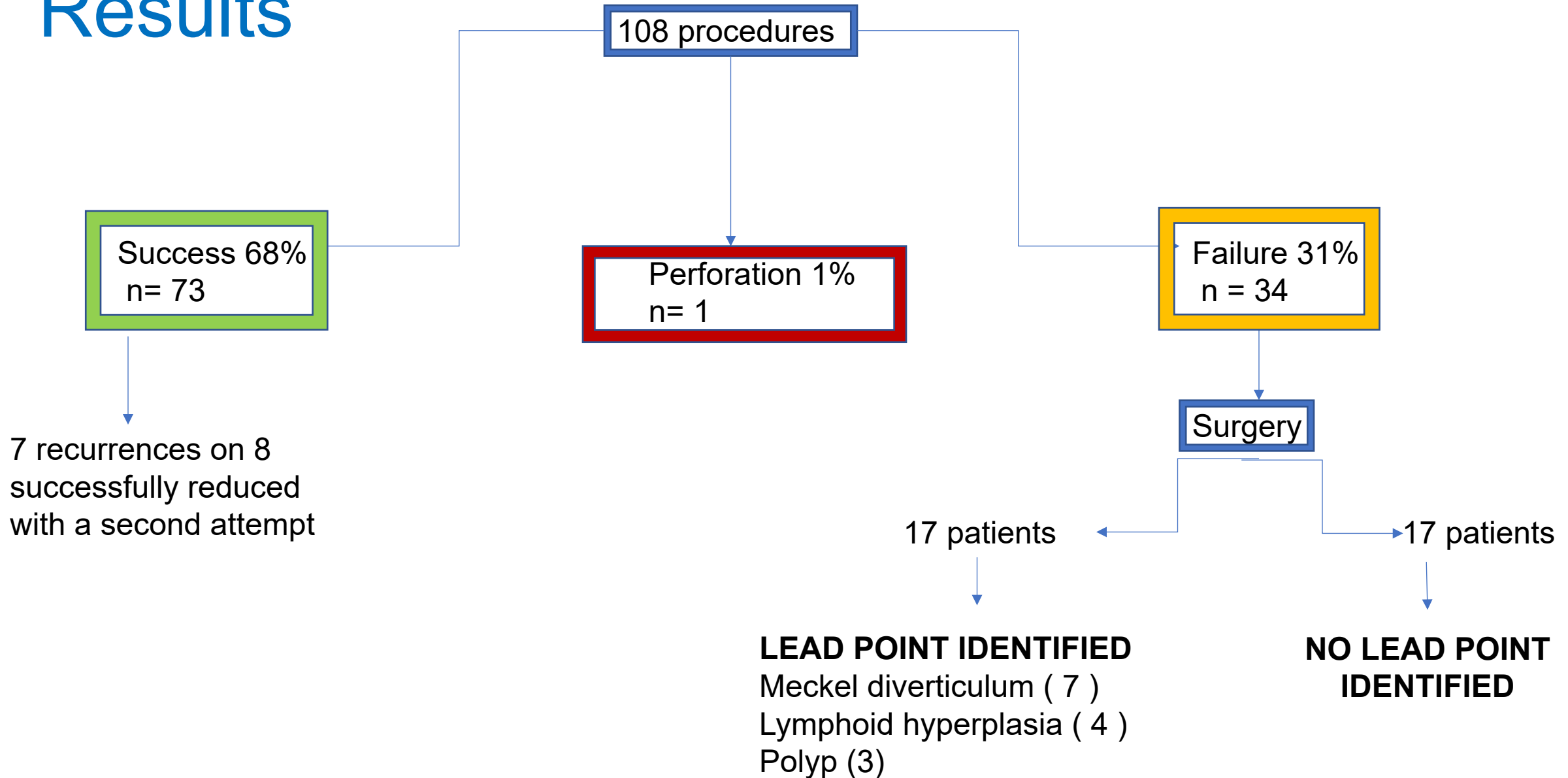
- 100 patients satisfied the inclusion criteria and were enrolled in the study.
- Median age 10 months
- Duration of symptoms: median 24 hours
- Predominantly ileocolic.

## REDUCTION RATE

■ Success ■ Failure ■ Perforation



# Results





# Results

Findings	Number of patients = 34
Ileo-ileo colic intussusception	2
Colo-colic intussusception	1
Ileocolic intussusception	14
Meckel diverticulum	7
Polyps	4
Other causes	6

# Results

Outcome	Duration of symptoms average
Success	50.35820896
Failure	48.57575758

No difference was found in duration of symptoms between children with successful outcome (median 24 hours, IQR 24 – 72, range 4 – 240) and those with failed reduction (median 32 hours, IQR 24 – 72, range 7 – 168), p 0.408.

# Conclusions

- The number of procedures has decreased over the 11 year period.
- Overall good successful rate in agreement with international standard.
- Failed procedures were associated with negative prognostic factor.
- 7 on 8 recurrences were successfully treated with a new attempt of air enema in agreement with literature.

# Conclusions

Intussusception reduction should be considered in all patients presenting with intussusception, if absolute contraindications are not present.

# Thank you for the attention!

- Special thanks to all the amazing Consultants, Sonos , Radiographers, fellows and SpRs working at GOSH!

