

A PROSPECTIVE STUDY OF EFFECTIVENESS OF ULTRASOUND GUIDED HYDROSTATIC REDUCTION FOR TREATMENT OF INTUSSUSCEPTION IN PEDIATRIC AGE GROUP

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Abstract

Background: Aim and Objectives: To study the effectiveness of ultrasound guided hydrostatic reduction for treatment of intussusception in infants and children aged 0- 12 years. **Materials & Methods:** The present hospital based observational study in which all suspected children aged 0-12 years with clinical diagnosis of intussusception (prospective) and records of intussusception cases admitted and treated by hydrostatic reduction/surgery from 2016-2020. **Sample size and Sampling:** According to SMVMCH data from hospital records, an estimated number of 10 patients with intussusception are seen annually. Retrospectively for 5years, there are 39 cases of intussusception as per hospital records. Approximate sample size 50 cases. Remaining cases studied prospectively. Non-probability purposive sampling was followed by which all cases fulfilling the Inclusion criteria with children aged 0-12 years suspected with intussusception and consenting to take part in the study was selected to participate in the study. **Results:** Among the total intussusception cases majority of the patients were found to be have ileocolic intussusception 32 (64.0%) and the remaining patient diagnosed with ileo-ileal intussusception were 18 (36.0%). most of the patient underwent ultrasound guided hydrostatic reduction which was found to be 28(56.0%), and 13 (26.0%) underwent laparotomy and the few patients underwent laparotomy and manual reduction were 9 (18.0%). **Conclusion:** In the present study 56.0% of children most of them were below 3years underwent successful ultrasound guided hydrostatic reduction have proved to be success with minimal side effects.

INTRODUCTION

Intussusception is a potentially fatal condition if left untreated. Retrospective hospital-based studies may underestimate the incidence of intussusception as they do not take account of patients who may present to other hospitals or clinics within the region in question or who may die elsewhere than in hospital or while being treated for an alternative diagnosis. Because of limited radiological facilities in some regions the diagnosis of intussusception may not be established in some patients.

Primary Objectives: To study the effectiveness of ultrasound guided hydrostatic reduction for treatment of intussusception in infants and children aged 0-12 years.

Study Design: Hospital based observational study in which all suspected children aged 0-12 years with clinical diagnosis of intussusception (prospective)

and records of an estimated number of 10 patients with intussusception are seen annually. Retrospectively for 5 years, there are 39 cases of intussusception as per hospital records. Remaining cases studied prospectively. Approximate sample size 50 cases. Intussusception cases admitted and treated by hydrostatic reduction/ Surgery from 2016-2020.

Inclusion Criteria

1. Children aged 0-12years suspected with intussusception

Exclusion Criteria

1. Adult cases
2. Legally authorized representative (LAR) of children not willing to consent for study.
3. Retrospective data which is incomplete.

RESULTS

In my study Majority of study participants was found to be in retrospective were 39(78%) and the remaining 11(22%) were in prospective

The distribution of study participants based on the USG diagnosis, majority of the patients were found to have ileocolic intussusception 32 (64.0%) and the remaining patient diagnosed with ileo- ileal intussusception were 18 (36.0%). [Table 1]

Distribution of the patient by management, most of the patient had undergone ultrasound guided hydrostatic reduction 28(56.0%), and the second highest was laparotomy 13 (26.0%) and the few

patients who had undergone both laparotomy and manual reduction were 9 (18.0%). [Table 2]

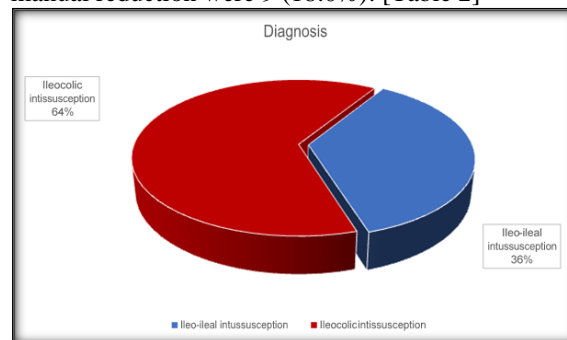


Figure 1: Distribution of study participants based on the diagnosis (n=44)

Table 1: USG Diagnosis of Distribution of study participants based on the diagnosis (n=50)

USG Diagnosis (Anatomical site of intussusception)	Frequency (n)	Percentage (%)
Ileo-ileal intussusception	18	36.0
Ileocolic intussusception	32	64.0
Total	50	100.0

Table 2: Distribution of study participants based on the management (n=50)

Management	Frequency (n)	Percentage (%)
USG guided hydrostatic reduction	28	56.0
Laparotomy	13	26.0
Laparotomy and Manual reduction	9	18.0
Total	50	100.0

DISCUSSION

In 32 cases of ileocolic intussusception, 28 cases had successful hydrostatic reduction. 3 cases are failed after 2 attempts which was mainly due to bowel edema, inter-bowel fluid and 1 case presented after 24 hrs of symptoms hence ultrasound reduction not done.

In 22 cases of Laparotomy in which 18 cases were ileo-ileal intussusception, 3 cases of failed hydrostatic reduction and 1 case of late presentation. 13 cases underwent Laparotomy. 9 cases underwent laparotomy and manual reduction

Strength and Limitations: Very few studies in India have found the role of ultrasound in diagnosing intussusception in the paediatric age group. This study have been a base in framing a protocol for management of intussusception. It is Hospital based study, temporarily cannot be maintained.

Possibility of observer bias in the study which have not been addressed. Due to smaller sample size generalizability is challenge. In our study there is no mortality and morbidity comparing other literature.

Other confounding factors previous hospitalization have not addressed in the study.

CONCLUSION

In the present study 56.0% of children most of them were below 3years underwent successful ultrasound guided hydrostatic reduction have proved to be success with minimal side effects.

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