

# PREVALENCE OF OBESITY AMONG INFANTS PRESENTING WITH INTUSSUSCEPTION

Khaled Ashour<sup>1</sup>, Mona Nada<sup>2</sup>, Mai Abeedy<sup>3</sup>, Gehad Eladely<sup>4</sup>, Ahmed. Elabany<sup>1</sup>, Omneya Magdy Omar<sup>5</sup>

<sup>1</sup>Alexandria University, Pediatric Surgery, Alexandria, <sup>2</sup>Ministry of Health Hospitals, Red Sea Governorate, <sup>3</sup>Ministry of Health Hospitals, Kafr El Sheikh Governorate,

<sup>4</sup>Ministry of Health Hospitals, Aswan Governorate, Egypt, <sup>5</sup>Pediatrics, University of Alexandria, Alexandria, Egypt

## Background

- Intussusception is a life-threatening illness. The causes underlying intussusception are not fully understood, although some predisposing factors are known. Intussusception is frequently seen to occur in well-nourished infants.

## Objective

- To determine whether patients presenting with intussusception have a high prevalence of obesity.

## Subjects & Methods

- This cross sectional study was conducted in 100 infants presenting with intussusception aged  $\leq 2$  years at the Pediatric Surgery Department. Anthropometric measures, history of recent upper respiratory tract infection, timing and type of intervention were recorded. A near median split divided the population into younger (aged  $< 8$  months,  $N=47$ ) and older (8-24 months,  $N=53$ ) groups. Obesity was defined as having a body weight for length  $\geq 97.7^{\text{th}}$  centile on WHO growth charts.

## Results

- The study comprised 58 boys and 42 girls, 31% of whom had upper respiratory infection in the preceding month. Obesity was present in 18% of patients, based on WHO growth charts. There was a trend towards higher percentage of obese infants within the younger (25%) compared to older age groups (12%,  $P = 0.085$ ), but no gender difference. Obesity did not influence the rate of success of hydrostatic reduction.
- Based on Egypt-specific growth charts, the percentage of infants with a weight-for-age centile  $\geq 85^{\text{th}}$  was 42%, of whom 7% were  $\geq 97.7^{\text{th}}$  centile. The corresponding percentages for the weight-for-length were 29% and 15% of patients respectively.

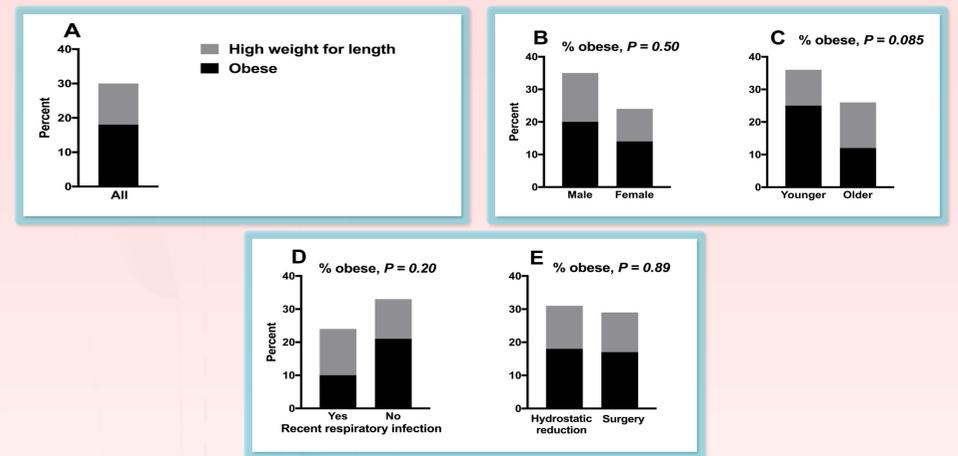


Fig. (1): Percent of intussusception patients with obesity ( $\geq 97.7^{\text{th}}$  percentile) and high weight for length ( $85^{\text{th}}$ - $97.6^{\text{th}}$  percentile) in the total population ( $N = 100$ ) (A) and within different subgroups (B-E), based on WHO weight for length growth curves for age 0-24 months. p values for comparisons of infants with weight for length  $\geq 85^{\text{th}}$  percentile or  $85^{\text{th}}$ - $97.6^{\text{th}}$  percentile were not significant across any of the subgroups. The younger and older subgroups were defined as those aged  $< 8$  months, and those aged  $\geq 8$  months, respectively.

- To evaluate the % of patients classified as obese according to the latest Endocrine Society Clinical Practice guidelines (16) we calculated WHO-based weight-for-length centiles. Among all patients, 18% were obese, based on having a WHO weight-for-length centile of 97.7% or above (16) (Figure 1). The proportion of obese infants was not significantly different across categories of gender ( $P = 0.50$ ; Figure 1-B), management outcome (hydrostatic reduction vs surgery;  $P = 0.89$ ; Figure 1-E), or presence of respiratory infection ( $P = 0.20$ ; Figure 1-D). However, there was a trend towards higher percentage of obese infants within the younger (25%) compared to older age groups (12%,  $P = 0.085$ , Figure 1-C).

## Conclusions

- There is a high prevalence of obesity in infants presenting with intussusception, more so under 8 months of age. The mechanistic link between obesity and the pathogenesis of intussusception deserves investigation.

## References

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Correspondence  
drmonymagdy@yahoo.com