

PREVALENCE OF OBESITY AMONG INFANTS PRESENTING WITH INTUSSUSCEPTION

Khaled Ashour¹, Mona Nada², Mai Abeedy³, Gehad Eladely⁴, Ahmed. Elabany¹, Omneya Magdy Omar⁵

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

⁴Ministry of Health Hospitals, Aswan Governorate, Egypt, ⁵Pediatrics, 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 ≤ 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.

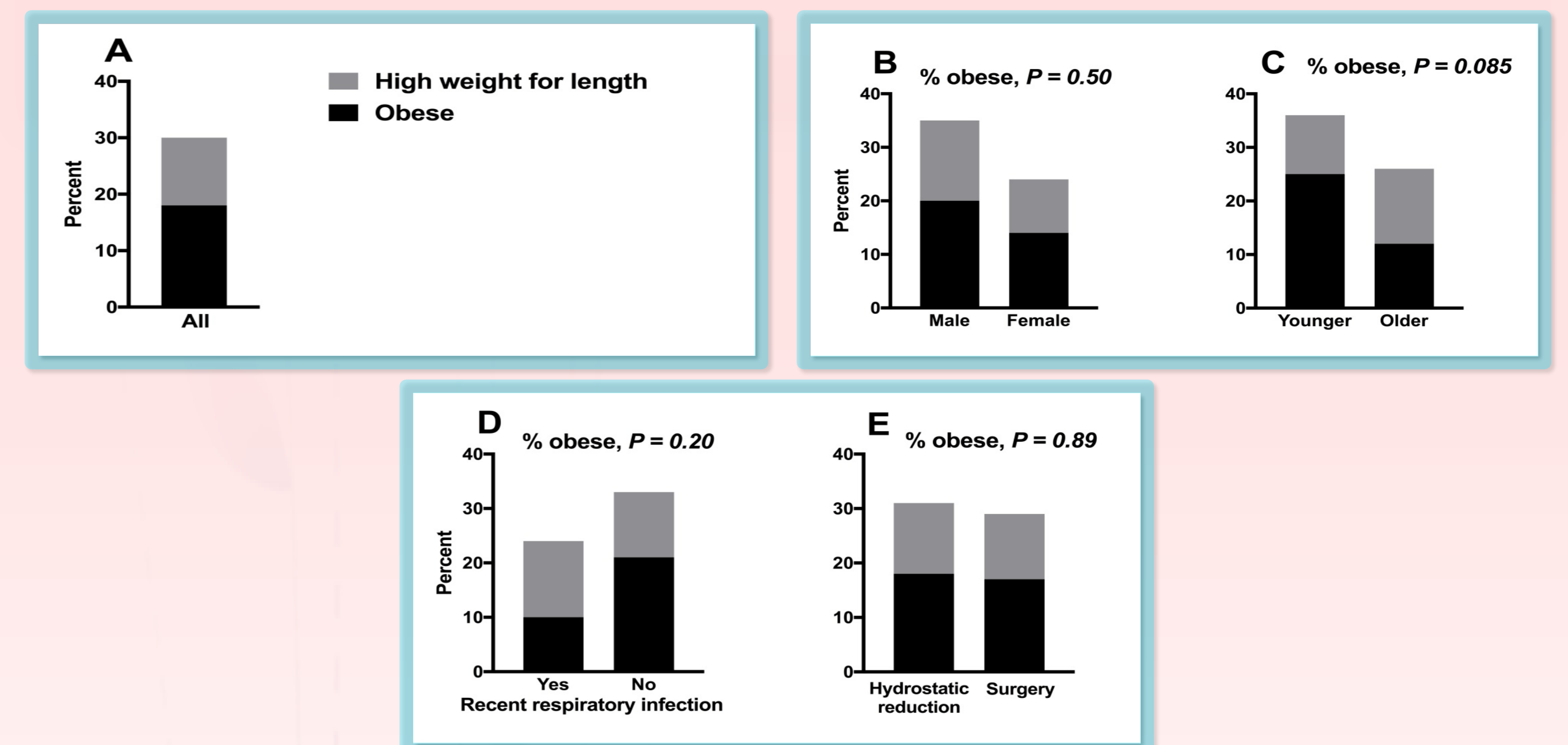


Fig. (1): Percent of intussusception patients with obesity ($\geq 97.7^{\text{th}}$ percentile) and high weight for length (85^{th} - 97.6^{th} percentile) in the total population ($N = 100$) (A) and within different subgroups (B-E), based on WHO weight for length growth curves for age 0-24 months. p values for comparisons of infants with weight for length $\geq 85^{\text{th}}$ percentile or 85^{th} - 97.6^{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 ≥ 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