Pediatr Radiol (2012) 42:1195–1196
DOI 10.1007/s00247-012-2473-4

COMMENTARY

# External manual reduction of paediatric idiopathic ileocolic intussusception with ultrasound assistance

**Jose L. Vazquez · Manuel Ortiz · Maria C. Doniz · Margarita Montero · Victor M. del Campo**

Received: 28 June 2012 / Accepted: 11 July 2012 / Published online: 9 August 2012


After submission of our paper published in this issue of *Pediatric Radiology* [1], we had the opportunity to perform external manual reduction in two additional children.

The first was an 8-month-old boy whose symptoms included pain and nonbilious vomiting for 12 h. He had an intussusception reaching the transverse colon without trapped fluid or significant adenopathy. While the boy was under sedation, successful and uneventful external manual reduction was achieved in approximately 10 min. The boy was observed for 1 1/2 h in the post-anaesthesia care unit, then transferred to the ward and discharged after a total hospital stay of 72 h. This was our 16th procedure.

The second child, who was encountered after this work was presented at the 2012 European Society of Paediatric Radiology meeting, was a 9-month-old boy with symptoms of remaining in a prostrate position with bilious vomiting and blood in the stool for 6 h. He had an intussusception almost reaching the splenic flexure. Abdominal plain film did not show obstruction of the small bowel. On US examination, the intussusception had trapped peritoneal fluid and there was significant adenopathy and preserved blood flow. We proceeded with external manual reduction with the boy under sedation, achieving reduction up to the mid-right colon. Subsequently, we administered two hydro-enemas, reducing the intussusception with abundant reflux of liquid into the small bowel. Most of the liquid was drained out of the colon through a rectal catheter. Given the boy's clinical condition, he was monitored in the paediatric intensive care unit, recovering at a slower rate than prior patients. Twenty-four hours after the procedure, he began experiencing progressively worsening abdominal pain. US showed fluid-filled bowel loops and no intussusception recurrence. He was observed for a few hours. He clinically worsened, and at surgery volvulus of the small bowel was found with a two-and-a-half turn clockwise rotation. There was no malrotation, Meckel diverticulum, duplication or adhesion. A portion of the small bowel was resected, sparing the ileocaecal valve and terminal ileum.

J. L. Vazquez (✉)
Department of Radiology,
Complejo Hospitalario Universitario de Vigo,
Rúa de Pizarro 22,
Vigo, Spain 36204
e-mail: luis.vazquez.castelo@sergas.es

M. Ortiz
Department of Pediatrics,
Complejo Hospitalario Universitario de Vigo,
Vigo, Spain

M. C. Doniz
Department of Anesthesiology,
Complejo Hospitalario Universitario de Vigo,
Vigo, Spain

M. Montero
Department of Pediatric Surgery,
Complejo Hospitalario Universitario de Vigo,
Vigo, Spain

V. M. del Campo
Department of Public Health,
Complejo Hospitalario Universitario de Vigo,
Vigo, Spain

An increase in the bulk of a segment of the intestine might facilitate its torsion [2–4]. We do not know the definitive reason for the volvulus, but in the context of a complex intussusception, external manual reduction, water enema and oedematous bowel loops after the reduction, it was probably caused by a combination of factors. Therefore, caution is recommended when external manual reduction is considered in children with intussusception, and close patient monitoring after the procedure is indicated. It is also advisable to avoid lengthy, complex intussusceptions in sick children during the learning curve for this new procedure.

## References

1. Vazquez JL, Ortiz M, Doniz MC et al (2012) External manual reduction of paediatric idiopathic ileocolic intussusception with ultrasound assistance: a new standardized, effective and safe manoeuvre. Pediatr Radiol. doi:10.1007/s00247-012-2424-0
2. Tagart RE (1953) Ileo ileal intussusception due to Meckel's diverticulum and complicated by volvulus. Br Med J 2:475
3. Burke TE, Fitzgerald RJ (1985) Intussusception, volvulus and malrotation. Aust N Z J Surg 55:73–74
4. Dawrant MJ, Lee JC, Ho CP et al (2005) Complex presentation of intussusception in childhood. Pediatr Surg Int 21:730–732