IS-7  Intussusception reduction by pediatric surgical team: How to improve safety and outcome

Department of Pediatric General and Urogenital Surgery, Juntendo University School of Medicine

Tadaharu Okazaki, Yuki Ogasawara, Nana Nakazawa, Atsuyuki Yamataka, Hiroyuki Kobayashi, Toshihiro Yanai, Masahiko Urao, Yoshifumi Kato, Geoffrey J. Lane, Takeshi Miyano

Purpose: Commonly, experienced radiologists perform intussusception reduction (IR). We reviewed IR using a standard protocol performed by pediatric surgical team. Methods: 378 cases of intussusception treated from 1980 to 2005 were reviewed. IR was performed using a water-soluble contrast agent under fluoroscopy unless there was clinical evidence of peritonitis. Before 1998, IR was performed by pediatric surgical trainees (group A). In 1998, a standard protocol (double-balloon tube, maximum pressure of 120 cm H₂O, repeated a maximum of 5 times, and IR performed by a pediatric surgical trainee under the supervision of a consultant pediatric surgeon) was adopted (group B). As part of the protocol, the operating room was on call for emergency surgery. Results: Of 378 cases, 21 required immediate laparotomy due to peritonitis. IR was performed 138 cases in group A and 219 in group B. Patient age, sex, and duration of symptoms (group A: 14.5 ± 7.8, group B: 13.1 ± 9.9 hours) were not statistically significant. Success for IR in group A was 71.7% and significantly improved for group B at 94.5% (p < 0.01). In group B there were 128 cases referred for failed IR performed by radiologists or pediatricians elsewhere. We reduced 118 cases (92.2%). The rate in group A was significantly less at 54.0% (p < 0.01). Bowel perforation during IR occurred in 2 (1.4%) in group A and 2 (0.9%) in group B, but both group B cases were transferred immediately for surgery with good outcome. Conclusion: IR by a pediatric surgical team is safer and has better outcome, and is thus more efficient.