Gastroschisis: Improving the survival rate by implementing aseptic techniques

Kagiso Batka-Makwinja
University of Pretoria, South Africa

Gastroschisis has been used as the bellwether condition for assessing an institution’s capacity to deliver newborn surgical care. Therefore evaluating the treatment and outcomes of gastroschisis neonates is of importance to any unit offering neonatal surgical care. These neonates are particularly susceptible to sepsis, and mortality due to sepsis. The survival rate in developed countries has increased to 90%, but in developing countries may be as low as 20%.

This prospective study was aimed at determining whether implementation of and adherence to aseptic interventions could improve the survival rate of gastroschisis neonates, in this high prevalence region. The interventions included, written policies prioritising and re-enforcing hand washing and a ‘bare-below-elbows’ approach, establishing compliance to uniform blood culture taking techniques, using new Silo-bags for staged abdominal closures, and insertion and maintenance of central lines according to standardised protocols. Video material and physical demonstrations were used to demonstrate the techniques described in the above protocols. The World Health Organization’s (WHO) Hand Hygiene Self-Assessment Framework was used and this is a systematic tool to obtain situational analysis of hand hygiene promotion and practices in a specific unit. The survival rate of gastroschisis neonates increased to 67% from 40% after implementation and adherence to aseptic techniques and interventions. Compliance to aseptic protocols increased by 43%. Observations demonstrated a decrease in the rate of blood culture contamination rate. These findings may be utilised to drive initiatives and strategies to improve implementation policies at any level or setting of healthcare services.

Biography

Kagiso Batka-Makwinja is a qualified medical doctor doing her fellowship specialization in Pediatric Surgery at the University of Pretoria. She serves in the executive committees of the South African Pediatric Surgical Trainees Association, the South African Society of Surgeons in Training and the International Pediatric Endoscopic Group. Dr Batka-Makwinja has presented topics globally: ‘Infant Feeding in HIV Positive Mothers’ in Barcelona, Spain; ‘HIV Treatment Compliance’ in Fortaleza, Brazil; Pediatric Laparoscopic Ovary-sparing Surgery in Benign Ovarian Neoplasms’ in Kwazulu-Natal and ‘Pediatric Laparoscopic Appendectomies’ in Cape Town, South Africa. Kagiso Batka-Makwinja lives in Gauteng, South Africa.

kagisobatka@gmail.com

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