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INCIDENCE AND PREDICTORS OF BURIED BUMPER SYNDROME FOLLOWING GASTROSTOMY INSERTION: A SYSTEMATIC REVIEW

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Introduction: Gastrostomies are widely used to provide enteral nutrition support. Buried Bumper Syndrome (BBS) is a recognised complication seen following gastrostomy insertion, describing the migration of the internal bumper along the stoma tract towards the skin. The consequences of BBS can be fatal. Currently, there is a paucity of knowledge about the incidence and predictors of BBS, which is addressed in this study by systematically reviewing the medical literature.
Method: A systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Guidelines (PRISMA). Four databases (EMBASE, MEDLINE, CINHAL, Web of Science) were utilised, and studies identified by searching for key terms relating to gastrostomy and BBS (Jan 1980 -Dec 2016). Unpublished studies were identified from conference abstract booklets. Two independent reviewers screened studies to identify those that included description of adult patients with BBS. Data was extracted relating to patient demographics, incidence, time to presentation and factors associated with BBS.
Results: 434 studies were initially identified (database search and grey literature). Of these, 299 (68.9%) were excluded following screening review of title and abstract (Kappa coefficient of reviewers = 0.753). Of the remaining 135 studies, 85 met inclusion criteria (35 case studies, 11 case series and 39 cohort studies). No controlled trials were retrieved. In total, 16,627 patients were described post gastrostomy placement. 473 cases of BBS were reported in the literature, giving a pooled estimate incidence of 2.8% (0.46 - 8.80%). The median age of presentation was 66 years, with 59.1% being in males. BBS was most frequently associated with Freka tubes (40.7% of all reported cases), however reporting bias may have heavily influenced this outcome. The time to BBS presentation ranged from 3 days to 7 years. Common predictors of BBS reported in the literature include tight external bumpers and increased external traction made directly by the patient or during gastrostomy care.
Conclusion: This is the first study to systematically review the incidence of Buried Bumper syndrome and assess factors predicting its development. The paucity of high quality studies identified in this systematic review, provides the impetus to develop a national gastrostomy registry accurately assessing gastrostomy outcomes. Healthcare professionals, patients and their caregivers need to be appropriately educated about BBS, considering factors such as tightness of external bumpers and minimising external traction.

Disclosure of Interest: None Declared

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