Only a small percentage of T1D Adolescents achieved Target HbA1c as per NICE (5%) and ISPAD (11%) guidelines.

Complications of DKA and severe hypoglycemia episodes were less pronounced in those on CSII in our cohort during the study period.

British Society of Paediatric Gastroenterology, Hepatology and Nutrition

492 IMPACT OF GASTROSTOMY ON GROWTH IN CHILDREN: A SYSTEMATIC REVIEW

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Background Gastrostomy placement in children is invasive and costly, both in terms of finance and impact on the child and their family. The primary goal of inserting a gastrostomy is usually to support the child's nutrition and ensure adequate growth is maintained.

Objectives We performed a systematic review to evaluate the effectiveness of a gastrostomy on improving physical growth in children.

Methods Medline and Embase databases were searched following PRISMA guidelines. The inclusion criteria for articles were studies: reporting the use of gastrostomy to support nutrition, reporting at least one anthropomorphic outcome measure, and reporting outcomes in children exclusively under 19 years of age. Exclusion criteria were studies: containing fewer than five subjects, reporting systematic reviews, meta-analyses or qualitative findings. Screening of studies identified by the search strategy was carried out independently by two reviewers, and consensus achieved with any discrepancies. Data were extracted using a standardised proforma.

Results Thirty studies were included in the systematic review – 19 retrospective, 9 prospective, 1 both prospective and retrospective and 1 cross-sectional. No relevant randomised controlled trials were found. Studies included encompassed 1618 children from 18 countries. Although most common indications for a paediatric gastrostomy were covered by the studies included, many studies focussed on a single condition, chiefly cerebral palsy or cystic fibrosis. The majority of studies reported an increase in weight. This was most marked in the first 6 months following gastrostomy tube placement, and in children under 3 years old. Changes in body mass index (BMI) tended to follow a similar trajectory. Conversely, there was considerable variation in effect on height between studies, with only 7/12 studies (58%) showing a significant increase in height post gastrostomy-placement. Other anthropometric measures of growth were infrequently reported.

Conclusions There is good evidence that gastrostomy-tube feeding is effective in improving weight gain in children. However, evidence for improvement in other measures of growth following gastrostomy insertion is weaker. Care needs to be taken to ensure adequate overall growth and avoiding obesity in children with a gastrostomy. There is some evidence to support early gastrostomy placement with catch up growth appearing better in younger children. Further work is needed

to investigate the effect of gastrostomy feeding on broader anthropometric measures including height, skinfold thickness and head circumference. This will provide a clearer understanding of how gastrostomy feeding impacts a child's overall growth, and how this compares with other interventions to improve nutritional status.

493 A SYSTEMATIC REVIEW OF SOCIAL OUTCOMES IN PATIENTS WITH BILIARY ATRESIA

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Background Biliary atresia is an inflammatory obliterative cholangiopathy which presents in early infancy with obstructive jaundice. It is the most common indication for liver transplant in childhood. Following improved medical outcomes for children with biliary atresia, a new clinical and research focus is on promoting long-term well-being and quality of life. However, information on social outcomes, including markers of societal integration such as education, employment, and family outcomes, are inconsistently documented in existing studies, and have never previously been systematically reviewed.

Objectives We aimed to systematically review the social outcomes of patients with biliary atresia (BA) including education, employment, family and social functioning outcomes.

Methods A systematic review of four databases (Medline, Embase, Global Health, Maternity and Infant Care Database) was conducted in April 2020, supplemented by reference searching, with NHLBI scoring for quality appraisal. Each abstract and full text was independently reviewed by two researchers, and quality appraisal was independently conducted by two researchers. The protocol was registered on PROSPERO (CRD42020178846).

Results 55 studies met inclusion criteria (39 cohort, 11 cross-sectional, five case-control), including 5,156 participants from 16 countries. BA post liver transplant (LT) (18 studies), native liver survival (NLS) (16 studies), mixed LT/NLS (16 studies) and 5 of other cohorts (e.g. listed for LT) were incorporated. Study outcomes included; education (n=39), employment (n=19), pregnancy (n=24), and social functioning (n=25). Patients with BA had lower school functioning scores than controls, with no difference when comparing those with and without LT. The need for additional educational support ranged between 2% and 48% of children. Adult patients with BA were employed at high rates (range 60–100%), with no difference between post-LT and NLS cohorts when compared in 1 study. Successful pregnancies were reported in 19 studies, with mostly small sample sizes. In 6/7 NLS studies mentioning pregnancy, complications included derangement in liver function and variceal bleeding secondary to portal hypertension. Social functioning scores did not significantly differ from healthy controls when compared in 7/9 studies.

Conclusions Existing evidence on social outcomes for children and adolescents with BA is predominantly from non-controlled, single centre studies and based on parental surveys. The current findings suggest that school functioning is lower compared to peer groups and not influenced by having a