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BARIATRIC SURGERY FOR PAEDIATRIC OBESITY: ARE WE REPLACING ONE SET OF PROBLEMS WITH ANOTHER? A SYSTEMATIC REVIEW OF THE LITERATURE

Jennifer Billington[1,2], Lauren Stroud[1], Varadarajan Kalidisan[1]
[1]Royal Alexandra Children's Hospital, Brighton, UK, [2]Imperial College London, London, UK

Aims of the study: The prevalence of childhood and adolescent obesity is increasing, with many patients requiring bariatric surgery to reduce their BMI and the frequency of obesity related co-morbidities. We conducted a systematic review to evaluate the post-operative complications in patients <18 years undergoing Laparoscopic Adjustable Gastric Band(LABG), Roux En Y Gastric Bypass(RYGB) or Laparoscopic Sleeve Gastrectomy(LSG).

Methods: Following ethical approval and study registration, online literature searches were performed from January 2000 to October 2016. Inclusion criteria were as follows: (1)full-text studies with obese non-syndromic patients <18 years undergoing LAGB, RYGB or LSG (2)clearly reported mortality and peri/post-operative outcomes and (3)mean follow up of ≥12 months post-operatively with ≤20% of patients lost to follow up. 5,221 articles were identified and 21 met the inclusion criteria.

Results: 21 studies comprising 23 patient cohorts(n = 1304) were included;11 LABG studies(n = 585), 6 RYGB studies(n = 398) and 5 LSG studies(n = 321). 13 retrospective, 7 prospective and 1 randomised trial were included. 30-day mortality rate was 0% across all studies. The overall mortality rate for LABG, RYGB and LSG was 0.5%, 0.7% and 0% respectively. Overall complications rates in these three groups were 24%, 13% and 8%. Band-specific complications were reported in 75/585 patients (13%) post LABG, with a re-operation rate of 8%. The overall re-operation rate was 14%, with broadly comparable figures for LAGB and RYGB. The total leak rate for RYGB was <1%. 4% of all patients were converted to malabsorptive anatomy and 2% underwent laparoscopic cholecystectomy for symptomatic gallstones. LSG had consistently fewer reported complications, re-operation and mortality across all included studies.

Conclusions and relevance: Paediatric bariatric surgery exposes an already vulnerable group to considerable morbidity. The results of this systematic review demonstrate a trend towards an increased frequency of observed complications. Large, prospective trials are needed to analyse this further.