

P52

Feasibility of “The Defect Study”: Neonatal diaphragmatic defect measurement and repair techniques in Congenital Diaphragmatic Hernia

Paediatric Surgery Trainee Research Network, MP Eastwood, G Bethell, A Rooney, F Arthur, R Harwood

Paediatric Surgery Trainees Research Network (PSTRN)

Corresponding Author: Miss Mary Patrice Eastwood
(patrice.eastwood@gmail.com)

Introduction: Defect size and closure technique in neonates with congenital diaphragmatic hernia (CDH) has long term consequences for morbidity in survivors. Although subjective operative reporting of defect size has been standardised, objective evaluation is lacking. There is no reported optimum closure technique related to size and position of diaphragmatic defect. We aimed to objectively describe diaphragmatic defects and repair methods at the time of neonatal CDH repair.

Methods: A national, three centre cohort feasibility study was undertaken over a 4-month period. Data collection was registered as service evaluation at participating centres. All surviving neonates with CDH undergoing defect closure were eligible. Anonymised data were collected using a RedCAP database. Data collection variables ($n=47$) included both antenatal and postnatal measures. Data were checked for normality and reported as mean \pm SD or median (IQR).

Results: 12 neonates were eligible for inclusion, 10 (83%) were included. Observed/Expected Lung Head Ratio (%) was reported in 5 cases (45 ± 8), neonates were term, male (60%), birth weight (3.3 ± 0.5 kg). 80% of patients had a laparotomy, 80% had a left-sided defect, 60% a patch repair with PTFE and 60% graded defect size C. Poorly reported variables included pre-operative oxygenation and defect size was measured in 30%.

Discussion: Data collection through RedCAP was feasible and most variables were documented. Simplifying the intraoperative data collection form and providing clear instructions for taking measurements

may improve reporting. A further pilot study with these modifications and improving engagement through advertisement, emails and online presence is intended to optimize the study before roll-out.