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Retrospective Study of Tracheo Esophageal Fistula in Neonates in a Tertiary Care Hospital – Case Series

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ABSTRACT

TRACHEOESHOPHAGEAL FISTULA

Tracheoeshophageal fistula is most common emergency in neonate. It is most common congenital anomaly of the oesophagus. Most common presentation is polyhydrominos antenatal scan. The neonate has frothing from mouth coughing vomiting cyanosis and respiratory distress

CLINICAL PROFILE

Out of 133 admissions in NICU in the month of April 4 babies are diagnosed with tracheoeshophageal fistula subjected to surgery. Antenatal scan reveals polyhydrominos in three babies out four. Three babies weigh more than 2 kg and one baby weighs 1250 grams. Three babies born at term gestation and one baby born at 27 weeks of gestation. These babies admitted in NICU and given routine care and stabilised. X ray shows coiling of nasogastric tube. Replogle tube with continuous negative suction is given to them. All babies are taken to surgery the next day. All of them has type c TEF. One baby died and three were discharged.

DISCUSSION

Success in the survival of neonate is attributed to improved neonatal intensive care with surgical advances and post op care. Early recognition and prompt and efficient care of the neonates was provided by neonatologist surgeon and intensivist. A precise surgical technique and proper mobilisation of upper pouch and good anastamosis are key events.

INTRODUCTUION

The most common defect is oesophageal Artesia with distal TEF type C. It is surgically correctable anomaly of the gastrointestinal and respiratory system and continues to be major challenge in the neonatal surgery. Major factors are low birth weight,prematurity,respiratory distress due to aspiration, congenital heart defects . Evaluation with x ray chest after passing nasogastric tube electrocardiography echo rigid bronchoscopy for evaluation of anatomy of airway is necessary for operation. Corrective measures for low birth weight anemia medical optimisation of aspiration pneumonia or CHD making TEF a multidisciplinary approach

CASE SERIES PROFILE

Out of 133 new born admitted in Pravara medical college 4 diagnosed with TEF. Three of them are born are born at term gestation with weight 2.1 kg 2.2 kg and 2.3 kg. One was born at preterm with 1.7 kg. The most common presentation is frothing and respiratory distress

BASIC CHARACTERISTICS OF NEONATE

Gender
Male 2
Female 2
Gestational weeks
More than 37 3
Less than 37 weeks 1
Birth weight
More than 2500 grams 0
Less than 2500 grams 4
Associated congenital anomalies
Present 2
Absent 2
Type of oesophageal Artesia
TYPE A 0
TYPE B 0
TYPE C 4
TYPE D 0
TYPE E 0
Surgical management
One stage operation 1
With gastrostomy 3
Hb levels g per dl
More than 13 4

Less than 13 0
Platelet count *1000 per mm
More than 150 4
Less than 150 0
Sepsis event
Present 1
Absent 3
Waterston classification
A 0
B 2
C 2
Outcome
Discharged 3
Died 1

MANAGEMENT

Babies well established in NICU and connected to Replogle tube with continuous negative suction.

Babies are screened to rule out VACTERAL association. One baby has spontaneous pneumothorax which got relieved on placing intercostal drain

Surgery repair of defect with anatomises, post operative ventilator support is required for 2 patients

Adequate antibiotics are given according to protocol. Once baby has passed meconium tropical feeds are initiated

RESULTS OF OPERATION

Out of 4 babies 3 babies recovered and were thermodynamically stable and on full feeds with adequate weight gain at discharge. One baby had two operations with pericardial muscular flap repair later succumbed to sepsis. Another baby has pneumothorax for which ICD has been placed and got resolved.

DISCUSSION

Brambling and Campbell in a review has observed survival rate in various studies by Waterston et al and found 95% of survival in babies weighing more than 2 kg. 52 to 72 % if associated with cyanotic heart disease or 68% with lobar pneumonia ASD PDA cong anomalies 6% with severe pneumonia cong CHD and less than 1.5 kg

In this case series two babies are positive for sepsis screen and started on iv antibiotics one was diagnosed with aspiration pneumonia one baby had pneumothorax

CONCLUSION

Success in the survival of neonate with TEF is attributed to improved neonatal intensive care unit with surgical advances and post operative care. Waterston preoperative risk factor reflects the prognosis of oesophageal Artesia. Surgical technique with proper mobilisation of upper pouch and good anatomises is key for better surgical outcome