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Outcome of surgical treatment of esophageal atresia and its associated factors among newborns at FMIC Hospital Kabul, Afghanistan

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Introduction: Esophageal atresia (EA) with or without tracheoesophageal fistula (TEF) (EA+TEF) is one of the common neonatal anomalies often presenting with excessive salivation, and inability to feed or pass a feeding tube into the stomach. Esophageal atresia/tracheoesophageal fistula (EA/TEF) is a condition resulting from abnormal development before birth of the tube that carries food from the mouth to the stomach (the esophagus).

Methodology: An analytical retrospective hospital based research study was conducted to accomplish study objectives. Records of 165 newborns that were admitted with EA/TEF and had undergone survey at French Medical Institute for Children (FMIC), Kabul, Afghanistan were reviewed. Data was collected through a self-developed structured questionnaire. Data was analyzed with the help of Statistical Package for Social Sciences version 19.0. Chi-square test of independence was run and P-value was computed to determine an association between factors and outcome of EA/TEF among newborns.

Results: A total of 165 newborns who were admitted with the diagnosis of esophageal atresia with or without tracheoesophageal fistula and undergone surgery were recruited in this study. Most of the study participants (61.21%) were males. Majority of the cases (69.09%) had birth weight of 2 to 3 kg and had type “C” classification of EA+TEF. In terms of their ages at the time of surgery, most of them were aged less than one week during the surgical procedure. Around 31% of the cases had an associated anomaly VACTERL. Around 69% of the cases had survived post-surgery. Most of the cases had developed complication like: stenosis, fistula and recurrence. With regard to length of stay during treatment, around 83% of newborns stayed for more than 10 days. This study has manifested that weight, presence of anomaly VACTERL, and complications after surgery were significantly associated with outcome of surgical procedure among newborns with the diagnosis of EA+TEF admitted to FMIC hospital.

Conclusion: The condition of EA+TEF is quite prevalent among newborns in Afghanistan. Weight of newborn, presence of anomaly VACTERL and complication were found as significant determinants of outcomes of surgery for newborns with EA+TEF. It is important to design interventions which could help in improving the outcomes of surgery and reduce the risk of mortality among newborns. The high incidence of low birth weight, delayed diagnosis, poor referral and lack of advanced neonatological back up are important contributory factors to poor outcome.

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