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ORIGINAL RESEARCH

Outcome of Tracheoesophageal Fistula Surgery in a Pediatric Surgery Institution

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ABSTRACT

Background: In pediatric surgery tracheoesophageal fistula (TEF) and Esophageal atresia (EA) are the common congenital anomalies.The present study was conducted to assess the outcome of Tracheoesophageal Fistula Surgery in a Pediatric Surgery Institution.

Material and methods: A retrospective study was done in the department of pediatric surgery. The study was done with the patient records for a period of two years. All the cases operated for TEF/EA were included in the study. Data was analyzed. P-value of < 0.05 is considered as significant.

Results: In the present study total operated cases were 130. Male and Female babies were each 65 (50%). Primary TEF Repair was done in 104 cases and Esophagostomy/ Gastrostomy (EG) was done in 26 cases. Among the primary TEF repair case 53 were males and 51 Females. In EG group 11 were Males and 15 Females. Total number of cases survived postoperatively and discharged were 34 (26.15%) and the remaining 96 (73.84%) cases were died postoperatively or discharged against medical advice.

Conclusion: The present study concluded that total number of cases of Tracheoesophageal Fistula survived postoperatively and discharged were 34 (26.15%) and the remaining 96 (73.84%) cases were died postoperatively or discharged against medical advice.

Keywords: Tracheoesophageal Fistula, Esophagostomy, Gastrostomy

INTRODUCTION

Esophageal atresia and/or tracheoesophageal fistula (EA/TEF) is an infrequently encountered congenital anomaly, wherein the esophagus fails to develop normally and blindly ends as a pouch in the neck or upper thorax. An abnormal communication from the trachea to the distal esophagus is commonly present. The worldwide incidence of EA/TEF is approximately one in 2500 to 4500 live births.[1-4] Incidence of TEF/EF is 1:3500 live births.[5] Treatment of TEF/EA can be conventional open repair or thoracoscopic minimally invasive repair to establish or to maintain the continuity of the esophagus.[6,7] The terms “H-type” or “N-type” TEF refer to congenital fistulous tracks between the posterior wall of the trachea and the

anterior circumference of the esophagus.[8] Tracheoesophageal fistulas at a high origin show a more transverse course (H-type) than N-type fistulas that are located more caudally. The prevalence of this rare subgroup is 1 per 100, 000 births.[9] The present study was conducted to assess the outcome of Tracheoesophageal Fistula Surgery in a Pediatric Surgery Institution.

MATERIAL AND METHODS

A retrospective study was done in the department of pediatric surgery. The study was done with the patient records for a period of two years. Before the commencement of the study ethical approval was taken from the ethical committee of the institute. All the cases operated for TEF/EA were included in the study. Babies who are all discharged were considered Live after surgery, except discharged at request or Against medical advice or dead. Data was analyzed, if needed Chi-square analysis was done along with Two-tailed Fisher's exact test for P value with different variables. P-value of < 0.05 is considered as significant.

RESULTS

In the present study total operated cases were 130. Male and Female babies were each 65 (50%). Primary TEF Repair was done in 104 cases and Esophagostomy/ Gastrostomy (EG) was done in 26 cases. Among the primary TEF repair case 53 were males and 51 Females. In EG group 11 were Males and 15 Females. Total number of cases survived postoperatively and discharged were 34 (26.15%) and the remaining 96 (73.84%) cases were died postoperatively or discharged against medical advice.

Table 1: Association between Sex of the baby and outcome

Gender and outcome	Live	Dead	Total	p-value
Male	19	46	65	< 0.05
Female	15	50	65	
Total	34	96	130	

Table 2: Association between Type of surgery and outcome

Type of surgery and outcome	Live	Dead	Total	p-value
Primary Repair male	16	37	53	< 0.05
Primary Repair Female	14	37	51	
EG Male	2	9	11	
EG Female	2	13	15	
Total	34	96	130	

DISCUSSION

Since isolated TEF is a very rare condition, epidemiological data are sparse. In contrast, there are numerous investigations of esophageal atresia with TEF. EA with distal TEF is the most common foregut malformation. From an embryological point of view, it represents a primary disturbance of the interaction between the foregut and the surrounding mesenchyme.[10] In contrast, it is assumed that isolated TEFs do not develop as a result of foregut organogenesis but are caused by secondary lesions of already differentiated organs.[11]

In the present study total operated cases were 130. Male and Female babies were each 65 (50%). Primary TEF Repair was done in 104 cases and Esophagostomy/ Gastrostomy (EG) was done in 26 cases. Among the primary TEF repair case 53 were males and 51 Females. In EG group 11 were Males and 15 Females. Total number of cases survived postoperatively and discharged were 34 (26.15%) and the remaining 96 (73.84%) cases were died postoperatively or discharged against medical advice.

Seo et al primary TEF repair was done in 90% of their cases with less mortality (24%) in their study.[12]

Wang et al. reported a lower survival in African American versus Caucasian infants with EA/TEF using the KIDS inpatient database, (84% versus 93%, $p < 0.001$).[13]

The retrospective studies using large administrative databases, with the majority of cases diagnosed with proximal esophageal atresia and distal tracheoesophageal fistula and a male predominance.[14,15]

CONCLUSION

The present study concluded that total number of cases of Tracheoesophageal Fistula survived postoperatively and discharged were 34 (26.15%) and the remaining 96 (73.84%) cases were died postoperatively or discharged against medical advice.

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