

THE FACTORS ASSOCIATED WITH SUCCESSFUL EARLY ENTERAL FEEDING IN GASTROSCHISIS

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Aim of the Study : To identified the factors associated with the successful early enteral feeding in gastrochisis and to develop further guidelines of treatment.

Methods: Retrospective cohort study of all babies with gastroschisis from January 2006 to December 2015 was done. Reviews included characteristic data, associated anomalies, peri-operative data, post-operative data and feeding data. Exclusion criteria were incomplete evaluated electronic data, patients with operative treatment for associated anomalies and dead. Successful early enteral feeding was defined when full feeding was achieved within 21 days of life.

Main Results: 105 gastroschisis patients were included in the study. The pateints were divided in successful early feeding group(n=56, 53%) and non-successful early feeding group(n=49, 46%) which reported respectively. In univariable analysis, significant factors for successful early feeding were age at the surgery(7 VS 11 hours, P-value=0.012), treatment with primary repair(63 VS 37%, P-value <0.001), post-operative extubation time(2.78 VS 5.21 days, P-value=0.025) , presence of electrolyte imbalance(17 VS 32%, P-value=0.032) and age of start enteral(8 VS 16 days, P-value<0.001). In multivariable analysis, significant factors for successful feeding clustered by primary treatment were female(RR=1.38, P-value<0.001), Gestational age >36 weeks(RR=1.23, P-value<0.001), age at surgery <10 hours (RR=1.15, P-value <0.001), postoperative extubation time <4 days(RR=1.39, P-value <0.001), and age at start feeding <10 days(RR=35.69, P-value <0.001).

Conclusion: Several factors found associated with successful early enteral feeding. The modifiable factors found in this study were surgery within 10 hours, early postoperative extubation within 4 days, start feeding before 10 days of life. These will guide the management of gastroschisis to achieve successful early enteral feeding.

Table: Multivariable risk ratio of factors associated with successful early feeding in newborns with gastroschisis clustered by primary treatment

Characteristics	Crude risk ratio (95% confidence interval)	P-value	Multivariable risk ratio (95% confidence interval)	P-value
Female	1.11 (0.87-1.40)	0.396	1.38 (1.22-1.55)	<0.001
GA > 36 weeks	1.57 (0.79-3.09)	0.196	1.23 (1.12-1.34)	<0.001
Age at surgery < 10 hours	1.88 (0.50-7.03)	0.349	1.15 (1.11-1.19)	<0.001
Postoperative extubation < 4 days	2.05 (0.27-15.52)	0.489	1.39 (1.32-1.46)	<0.001
Age at start feeding < 10 days	38.07 (4.84-299.53)	0.001	35.69 (5.57-228.69)	<0.001