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Daybreak of Endoscopic Surgery for Neonates - Our experiences

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Background and Aim: The applicability of endoscopic surgery has been expanding for several congenital anomalies in children. Endoscopic surgery might reduce their surgical stress and improve their scar. Recently we’ve applied endoscopic surgeries for neonates, when the diagnosis is defined clearly and the circulation and respiratory conditions are stabilized. We report our experiences.

Method: Seven endoscopic surgeries were performed in neonates under the sufficient informed consents.

Results: The ages ranged 1 to 25 days old and the body weights ranged 1.7 to 3.2 kg. All endoscopic surgeries didn’t develop into mortality and severe complications. The six laparoscopic surgeries were performed; laparoscopic excision for two neonates with ovarian cyst, laparoscopic pull-through (Soave-Denda method) for one neonate with Hirschsprung disease, and duodeno-duodenostomy for three neonates with duodenal atresia. During the laparoscopic surgery’s procedure, their circulatory and respiratory conditions were stabled. In a neonate less than 2 kg with duodenal atresia, however, the laparoscopic surgery was converted to open surgery, because of limited working space in a small abdominal cavity. Thoracoscopic repair of Esophageal atresia with fistula was also feasible, although the circulatory and respiratory status until the transection of tracheo-esophageal fistula was unstable.

Conclusion: The endoscopic surgery in neonate would be an adaptable method under the prepared circumstance. However, the careful management might be requested during the operation, especially thoracoscopic repair.