

## **Autologous umbilical cord patch repair 11 cases of congenital gastroschisis.**

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### **Abstract**

**Objective:** To improve the issue of neonatal congenital gastroschisis with success rate of surgery and long-term quality of life.

**Methods:** In January 2012-December 2016, the application of autologous umbilical cord repaired patch issue of 11 cases of congenital gastroschisis.

**Results:** 11 cases of children with a phase of the operation to be successful, the average length of hospital stay:  $19.68 \pm 2.75$  d. Postoperative follow-up of 6 months to 2 y, 8 patients recovered well. The formation of small abdominal wall hernia occurred in the other 3 cases. They were also cured after the secondary surgery repair.

**Conclusion:** Autologous umbilical cord patch repair can be applied on congenital gastroschisis. This method is simple and convenient, without foreign body rejection, with fewer complications, and most children don't need a second phase of the operation.

**Keywords:** Congenital gastroschisis, Autologous umbilical cord patch, Neonatal.

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### **Introduction**

Gastroschisis is a serious neonatal congenital abdominal wall defects [1,2]. To restore the exposed organs and a repair of abdominal wall as soon as possible, is the ideal method of treatment of children with gastroschisis. Since January 2012, our hospital used autologous umbilical cord patch to repair congenital gastroschisis in 11 new-born cases.

colon, bladder prolapse outside the abdominal cavity. Four cases were hospitalized with scleredema and 1 case with congenital heart disease. After admission by fasting, gastrointestinal decompression, out of stomach contents (Figure 1).

### **Surgical Method**

The operating room temperature is set at 28~30°C, children were placed in the circulating hot water blanket, tracheal intubation general anesthesia, in dwelling catheterization. Firstly, the intestine was exposed to warm saline and 0.1% warm iodophor carefully rinse, from the abdominal wall to the right side of the direction of transverse incision about 3 cm. The surgeon gently supported the expansion of the abdominal wall to expand the abdominal cavity, ligation of the umbilical artery and vein and umbilicus, and then the small intestine was emptied to determine whether there are other gastrointestinal malformations. The other exposed stomach, intestine, bladder and other prolapse were put back in. The autologous umbilical cord patch covered the umbilical right side of the cleft from left to right (Figure 2).

### **Results**

Eleven cases of children were operated using autologous umbilical cord patch repair, postoperative children to send SICU for monitoring, continued gastrointestinal decompression, retention catheterization, the use of ventilator support treatment, and the application of parenteral nutrition and antibiotics. The ventilator was removed in 1 patient at 24

### **The Clinical Data**

The group of 11 cases: 9 cases of male, female 2 cases; age: 4~26 h; weight: 2.05~3.2 Kg. Abdominal wall defects are located in the right side of the umbilical, the gap is about 3~4 cm. In 7 cases the stomach, small intestine and colon were exposed to the abdominal cavity. In 4 cases the small intestine,