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Short Clinical Report

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Jejunal ectopic pancreas in a neonate

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CASE PRESENTATION

An 18-hour-old male newborn transferred from another medical center, born by emergency c-section performed due to previous c-section and amniotic fluid leakage (15 days). The baby was born at 40 weeks gestation with a birth weight of 2590 g, length of 49 cm, and APGAR scores of 7-9 at 1-5 min, respectively. Oxygen was administered through the nasal cannula due to difficulty in breathing. O2 saturation improved from 80 % to 92%. Dextrose bolus was used to correct hypoglycemia (32 mg/dl). The patient was hospitalized in the NICU.

Physical exam was noteworthy for broad nasal bridge, short neck, mammary hypertelorism (trisomy 21 characteristics), soft but painful abdomen to palpation, and anorectal malformation without a fistula (imperforate anus). Laboratory tests showed Leukocytes 12.000, Hg 21.3 g/dl, Hct 59.9%, and Platelets 102.000. Abdominal x-ray showed dilatation of intestinal loops on the right side.

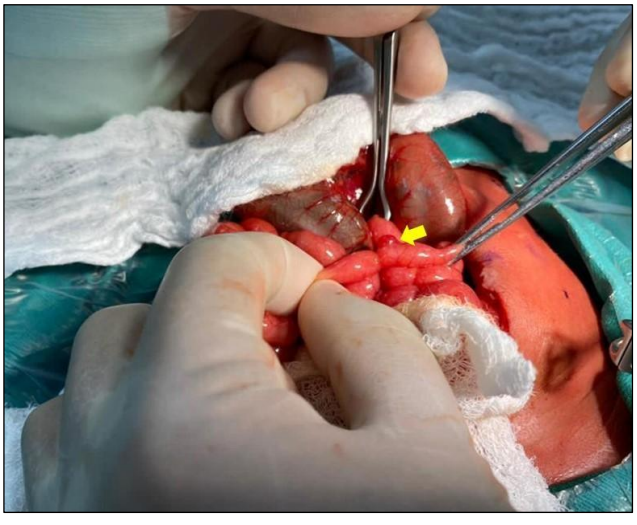

Figure 1: Intraoperative picture of EP.

The pediatric surgery department was consulted for surgery. Laparotomy was performed, which showed dilated intestinal loops and a 1x1 cm mass located 15 cm distal to the Treitz angle on the antimesenteric border (Fig. 1). The mass was resected, and end-to-end jejuno-jejunal anastomosis was performed. Due to the anorectal malformation, a divided colostomy was created at the descending colon level. The patient went back to the NICU intubated.

The immediate postoperative course remained uneventful. On postoperative day 6 trophic feed (orojejunal catheter) using breast milk was initiated, which was well tolerated. On postoperative day 10, the patient was discharged in good condition. On postoperative day 29, the patient presented again with severe staphylococcus haemolyticus sepsis and severe pulmonary hypertension and succumbed.

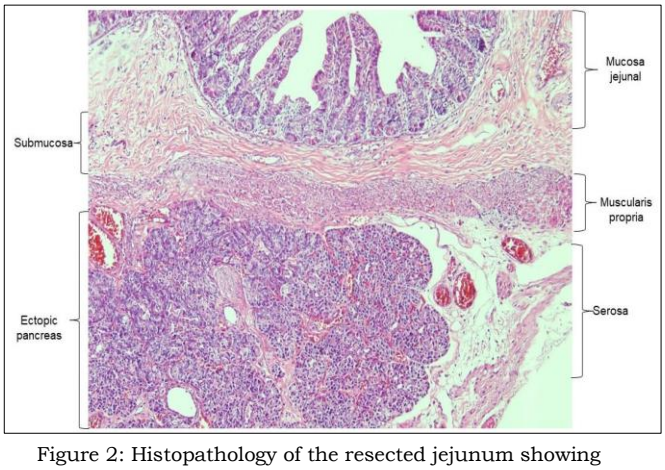

Figure 2: Histopathology of the resected jejunum showing pancreatic tissue in the serosa.

The histology report described a light brown color nodule that was 0.3 cm in diameter. It was formed by ectopic pancreatic tissue located in the jejunal serosa (Fig. 2).

DISCUSSION

Ectopic pancreas (EP) lacks anatomic and vascular continuity with the normal body of the pancreas. Global prevalence is 1% - 13%, but it is rarely seen in

neonates. [1-3] EP was first described in 1792 by Shultz [4] and has male preponderance. [5, 6] It has been identified throughout the GI tract (25%-38%), duodenum (17%-36%), jejunum (15%-21%), Meckel's diverticulum (5,3%), ileum (2,8%), and other sites. [1,2]

This anomaly is usually identified incidentally on exploratory laparotomy as in the index case. Even though the lesion is congenital, very rarely it is identified during the neonatal period. When symptomatic It can present as intestinal bleeding, obstruction, intussusception, or malignant transformation. [7-9]

The etiology is unclear, several theories have been proposed. One mentions that the embryonic cells could be transported to adjacent structures during the bowel axial rotation, which would certainly explain the described locations. In our case, it was located in the jejunum.

EP is found in the submucosal layer of the intestine in 54% of cases, 23% is found in submucosa and muscularis propria, 8% of cases only in the muscularis propria, 11% in subserosa, and only 4% compromises the whole intestinal wall. [10] Our case was limited to serosa. In 2019 Hamada et al. [11] described 5 cases of neonatal jejunal EP of which 3 were females and 3 presented with extramural EP, as in our case.

Heinrich´s histologically classified EP in 4 types. This classification was modified by Fuentes in 1973. Type 1 is the most frequent according to the literature. [2,11] All the tissues that normally form the pancreas were found in our sample, therefore it was histologically classified as type 1.

It is difficult to confirm the intra-operatory suspicion of EP based only on macroscopic appearance. Histologic confirmation is necessary. Surgical excision is always required if found incidentally and more so if there are no symptoms. Avoiding possible future malignant transformation. [8-10,12].

Table 1 summarized the characteristics of neonatal jejunal EP cases reported in the literature (Including our case).

Table 1. Characteristics of neonatal jejunal ectopic pancreas cases

Case	Source	Year	Sex	Site	Size	Age at surgery	Heinrich	Treatment
1	Suzuki et al. [13]	1973	-	Jejunum	-	2d	-	Jejunostomy + Membrane excision
2	Ogata et al. [16]	2008	F: 3	Jejunum:3	-	NB: 3	-	Resection + end-to-end Jejuno-jejunal anastomosis
3	Saka et al. [14]	2009	M	Jejunum	10 mm	6d	III	Wedge resection
4	Trandafir et al. [5]	2014	F	Jejunum	10 mm	NB	I	Resection + end-to-end Jejuno-jejunal anastomosis
5	Wakizaka et al. [15]	2016	F	Jejunum	-	3d	III	Resection + end-to-end Jejuno-jejunal anastomosis
6	Hamada et al. [10]	2019	F	Jejunum	15 x 15 mm	8d	I	Resection + end-to-end Jejuno-jejunal anastomosis
7	Kim et al. [1]	2021	F	Jejunum	30 × 20 mm	NB	I	Resection + end-to-end Jejuno-jejunal anastomosis
8	Nam et al. [8]	2021	F	Jejunum	25 x 15 mm	3d	II	Resection + end-to-end Jejuno-jejunal anastomosis
9	Our case	2021	M	Jejunum	10 x 10 mm	18h	I	Resection + end-to-end Jejuno-jejunal anastomosis

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Author Contributions: Author(s) declared to fulfil authorship criteria as devised by ICMJE and approved the final version.

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