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**Manuscript NO:** 58946

**Manuscript Type:** ORIGINAL ARTICLE

### *Retrospective Study*

Sonographic features of umbilical vein recanalization for **Rex shunt on cavernous transformation of portal vein in children**

Zhang YQ *et al.* Recanalized umbilical vein conduit on CTPV

Yu-Qing Zhang, Qing Wang, Mei Wu, Ya Li, Xiu-Liang Wei, Fei-Xue Zhang, Yan Li, Guang-Rui Shao, Juan Xiao

### **Abstract**

#### BACKGROUND

Rex shunt was widely used as the preferred surgical approach for **cavernous transformation of the portal vein(CTPV) in children** which creates a bypass between the

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### Recanalized umbilical vein conduit for meso-Rex bypass in ...

<https://www.sciencedirect.com/science/article/pii/S0039606009000038>

Apr 01, 2009 · The native **umbilical vein** conduit permitted decompression of the splanchnic venous system and should be considered a natural alternative to other interposition **vein** grafts. More experience is necessary to evaluate the long-term results of **recanalized umbilical vein conduit** for meso-Rex bypass in children with EHPVO.

Cited by: 23

Author: Marcelo E. Facciuto, Manuel I. Rodriguez...

Publish Year: 2009

### Recanalized umbilical vein conduit for meso-Rex bypass in ...

<https://www.researchgate.net/publication/24217549...>

The shunt also can be achieved through the interposition of a **conduit** using the **recanalized umbilical vein**, ... cavernous transformation of the portal vein. Most frequently, the bypass utilizes an ...

### Variant meso-Rex bypass with transposition of abdominal ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4609139>

Background. For the management of idiopathic extrahepatic **portal vein** obstruction (EHPVO), the meso-Rex bypass (MRB) restores **portal** inflow to the liver by inserting a venous **conduit** between a splanchnic **vein** and the intrahepatic left **portal vein** (PV) branch in the Rex fossa.

Cited by: 2

Author: Tae-Yong Ha, Kyung-Mo Kim, Gi-Young K...

Publish Year: 2015

### Recanalized umbilical vein as a conduit for mesenterico ...

<https://www.researchgate.net/publication/47358395...>

The utility of the **umbilical vein** for various purposes has been reported in several articles. Its use as a vascular **conduit** to bypass the blood circulation from SMV to the left **portal vein** for ...

### Pre- and Postoperative Imaging of the Rex Shunt in ...

<https://www.ajronline.org/doi/10.2214/AJR.11.7963>

The cause of extrahepatic **portal** venous obstruction remains unclear. The aim of the **Rex shunt** is to restore physiologic, hepatopetal flow by bridging blood through an autologous graft extending from the superior mesenteric **vein** (SMV) into the Rex recess of the left **portal vein**, thereby bypassing the extrahepatic **portal** venous obstruction.





Sonographic features of umbilical vein recanalization for Rex shunt



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Cavernous transformation of the portal vein | Radiology ...

https://radiopaedia.org/articles/cavernous-transformation-of-the-portal-vein

Cavernous transformation of the portal vein (CTPV) is a sequela of portal vein thrombosis and is the replacement of the normal single channel portal vein with numerous tortuous venous channels. For a discussion of demographics and presentation, please refer to the article on portal vein thrombosis.

Effectiveness of Rex shunt in children with portal ...

https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1399-3046.2008.01109.x

In this retrospective study, we analyzed the outcome of 25 children who underwent a Rex shunt procedure. The following venous grafts were used as the shunt: the autologous internal or external jugular vein (n = 17) or a cryopreserved graft (n = 5); in three patients the umbilical vein was recanalized.

Cited by: 56 Author: Dorothee Krebs-Schmitt, Andrea Briem-Ric...

Publish Year: 2009

Outcome of the Pediatric Patients with Portal Cavernoma ...

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4754495

Portal cavernoma (PC), also known as cavernous transformation of the portal vein, plays an important role in gastrointestinal bleeding among children. At least one episode of upper gastrointestinal bleeding was present in approximately 80% of patients with PC. The bleeding episodes are associated with frequent hospital admissions and high ...

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What is cavernous transformation of portal vein?



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What is portal vein thrombosis?



Can the portal vein re-canalize?



Feedback

Pre- and Postoperative Imaging of the Rex Shunt in ...

https://www.ajronline.org/doi/10.2214/AJR.11.7963

Preoperative imaging for a successful Rex shunt surgery should show the following: an absence of intrinsic liver disease, a patent intrahepatic left portal vein in the Rex recess that measures at least 2 mm in diameter, contiguity of the left and right portal veins, and an adequate mesenteric vein to serve as the inflow tract for mesenteric ...

Cited by: 4 Author: Agustín M. Cárdenas, Monica Epelman, Ka...

Publish Year: 2012

Recanalized umbilical vein conduit for meso-Rex bypass in ...

https://www.researchgate.net/publication/24217549...

Adapting Dardik's technique [8], Facciuto et al. [9] have described, in children, recanalization of the umbilical vein distally in the round ligament for meso-Rex bypass. This could allow portal ...

Neonatal Candida albicans Septic Thrombosis of the Portal ...

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC516300

However, it became sterile 9 days after antifungal treatment was started. At one month and a half of age, the abdominal gray-scale ultrasound showed a cavernous transformation of the portal vein. The sonographic appearance included an abnormal echogenic cord replacing the portal vein, along with a few tiny collateral vessels in the porta hepatis.

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## Pre- and Postoperative Imaging of the Rex Shunt in ...

<https://www.ajronline.org/doi/10.2214/AJR.11.7963>

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