

## Possibilities for Recovery of Blood Outflow During Thrombosis of the Liver's Own Hepatic Veins in the Early Periods after Transplantation

Khubutia M.Sh.<sup>1</sup>, Novruzbeikov M.S.<sup>1</sup>, Dydykin S.S.<sup>2</sup>, Gulyaev V.A.<sup>1</sup>, Lemenev V.L.<sup>1</sup>, Olisov O.D.<sup>1</sup>,  
Lutsyk K.N.<sup>1</sup>, Vasil'ev Yu.L.<sup>1,3</sup>, Kapitonova M.<sup>4</sup>, Gupalo S.<sup>5</sup>

1. N.V. Sklifosovsky First Aid Research Institute, Moscow, Russia.

2. Department of Operative Surgery and Topographic Anatomy, I.M. Sechenov First Moscow State Medical University (Sechenov University), Moscow.

3. Yuriy Vasil'ev — Kazan state medical university

4. Universiti Malaysia Sarawak, Department of Basic Medical Sciences, Faculty of Medicine and Health Sciences, Kota Samarahan, Sarawak, Malaysia.

5. Universiti Sultan Zainal Abidin, Faculty of Medicine, Kuala Terengganu, Terengganu, Malaysia.

### Abstract

Orthotopic liver transplantation with preservation of the retrohepatic inferior vena cava (IVC) using the so-called piggyback technique (MBT) has a number of priorities over the classical technique.

Since 2006, our Belghiti modified piggyback technique (MPBT) has been used in our center as a normal procedure for a liver transplantation program and has been performed 490 times by December 2018. Among them, in 6 recipients in the immediate postoperative period (12- 48 hours), occlusion of the own veins of the liver graft was noted. In all 6 observations, whole liver was used, obtained from the donor after ascertaining brain death. The age of these recipients was  $32 \pm 12$  years, the age of donors was  $48 \pm 10$  years. Percutaneous stenting was not used to correct the venous outflow. Re-transplantation due to the absence of a donor organ was not performed.

The best way to treat occlusion of blood outflow from the veins of a liver transplant is to prevent the very cause of its occurrence. The length of the upper vena cava of the graft must be short enough to prevent its fracture and redundancy, and the length of the anastomosis must provide a good venous outflow and be at least 6 cm. segments of the transplanted liver.

The results of our study led to the conclusion that early diagnosis of occlusion of the own veins of a liver transplant, based on clinical signs and ultrasound diagnostics, allows detecting pathology in time, reducing ischemic damage to the transplanted organ increases the possibilities of its recovery.

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### Introduction

Orthotopic liver transplantation with preservation of the retrohepatic inferior vena cava (IVC) using the so-called piggyback technique (MBT) has a number of priorities over the classical technique. Its indisputable advantages are noted, including reducing the

duration of thermal ischemia, ischemia, improving intraoperative hemodynamics and oxygen delivery to tissues, maintaining a stable perfusion pressure in the kidneys and renal postoperative function, and hence reducing the material costs of treatment<sup>1</sup>. This largely contributed to a wider distribution of the technique in the world, it is used more often than the classical one, and now 90% of liver transplantation centers actively use it<sup>2</sup>.

But due to the unnatural location of the graft, the recipient's vena cava is frontal and the cava-caval anastomosis is not sufficient, which is often caused by a mismatch between the diameters of the anastomosing sites of the donor and the recipient and their anatomic features. Compression of the anastomosis,

#### \*Corresponding author:

Vasil'ev Yu.L.  
Department of Operative Surgery and Topographic Anatomy, I.M. Sechenov First Moscow State Medical University (Sechenov University), Moscow.  
E-mail: y\_vasiliev@list.ru