

# 无心跳供者肝肾联合切取的技术改良和临床应用

袁小鹏,焦伟华,李 杰,郭在柱,高 伟

(广东省东莞市太平人民医院器官移植科,中南大学湘雅移植医学研究院太平分院,广东 东莞 523905)

**摘要** 目的 探讨快速肝肾联合切取方法的技术改良及其应用效果。方法 采用改良快速肝肾联合切取法切取供体 60 例,主要改良点有:原位灌注和表面降温相结合、下腔静脉及时插管引流和原位切除肠管后肝胆胰脾肾整块切取。结果 获取供肝 60 只和供肾 120 只,供肝和供肾存在变异的血管均保留完整。肝移植术后无原发性移植物无功能。肝肾联合切取组肾移植受者术后第 4 天血肌酐值与肾脏单独切取组比较无显著性差异(157 $\mu$ mol/L vs. 165 $\mu$ mol/L, P>0.05)。结论 改良的快速肝肾联合切取方法能有效地同时保护供肝和供肾的质量。

**关键词** 肝肾联合切取;肝移植;肾移植

中图分类号:R617 文献标识码:A

## A modified technique for combined liver and kidney procurement and its clinical application

YUAN Xiao-peng, JIAO Wei-hua, LI Jie, GUO Zai-zhu, GAO Wei

(Department of Organ Transplantation, Taiping People's Hospital of Dongguan city, Guangdong 523905, China)

**Abstract** **Objective** To explore a modified technique for combined liver-kidney harvesting and its clinical application. **Methods** A modified technique for combined liver-kidney harvesting has been performed for 60 cases. The main modified points were as follows: in situ perfusion plus surface cooling, drainage through inferior vena cava, en bloc resection of liver, pancreas, spleen and kidneys after removal of the gastrointestinal tract. **Results** 60 livers and 120 kidneys were harvested, the aberrant arteries of the grafts were preserved well. There was no primary nonfunction of the transplanted liver. The serum creatinine levels of the renal transplant recipients at 4 days post-transplantation had no significant difference between the group of modified combined liver-kidney retrieval and the group of retrieval of kidneys alone(157 $\mu$ mol/L vs. 165 $\mu$ mol/L, P>0.05). **Conclusions** This modified procurement can protect the quality of the liver and kidney simultaneously.

**Key words** Combined liver-kidney procurement; Liver transplantation; Kidney transplantation

随着近年来国内肝脏移植数量的逐渐增多,供者的肝肾联合切取已成为最常见的多器官联合切取方式。本院近年来约 1/4 的供肾来源于肝肾联合切取供者,发现其移植肾功能恢复受到明显影响<sup>[1]</sup>,于是对肝肾联合切取技术作了改良,取得了明显的效果,报道如下:

### 1 临床资料

#### 1.1 供者资料

供者均为无心跳供者,年龄 20~30 岁,肝功化验检查正常;HBsAg、HBeAg、HBeAb、HCV -Ab、HEV -Ab、HIV -Ab、RPR、TPPA 等指标均为阴性。器官切取

术前 1h 供者肌肉注射酚妥拉明 10mg,静脉注射肝素 400mg。

#### 1.2 肾移植受者资料

选择本院 2002 年 8 月~2005 年 8 月行肾移植术的 350 例受者作移植肾功能恢复的观察,选择标准如下:1、年龄 18~60 岁;2、无冠心病或髂血管严重硬化;3、术后无外科并发症,围术期无心功能衰竭;4、群体反应性抗体阴性,术后 7 天内无急性排斥。其中肝肾联合切取组受者 90 例;单独肾脏切取组受者 260 例。

1.3 改良的快速肝肾联合切取方法  
改良方法的要点为:原位灌注和表

面降温相结合,下腔静脉及时插管引流,切除肠管后肝胆胰脾肾整块切取。具体步骤如下:(1)腹部大十字切口进腹,探查并评估肝脏质量,在肝表面敷上无菌冰屑。(2)腹主动脉插管灌注:解剖腹主动脉远端,插入改装 22F 气囊导尿管,插入深度约 15cm,打气 30ml 阻断腹主动脉近心端,结扎腹主动脉远心端,灌注 HCA 液 3000ml。(3)下腔静脉插管引流。(4)肠系膜上静脉插管灌注,灌注 UW 液 2000ml。(5)游离双肾和输尿管。此时可以在肝脏和双肾表面倒入大量碎冰屑。(6)切除肠管:靠近胃切断肝胃韧带;沿

作者简介:袁小鹏(1972—08),男,江西省分宜人,主治医师,硕士。