

# Backflow hepatic arterial flush of liver graft by hepatic vein occlusion in living donor liver transplantation

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<b>Registration date</b> 19/10/2010	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 19/10/2010	<b>Condition category</b> Surgery	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

**Plain English summary of protocol**  
Not provided at time of registration

## Contact information

**Type(s)**  
Scientific

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## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Secondary identifying numbers**  
97-04-10

# Study information

## Scientific Title

Retrograde arterial flush of the liver graft in living donor liver transplantation: a prospective randomised study

## Study objectives

Formal arterial flush of graft during recovery procedures in living donor liver transplantation (LDLT) is usually not performed, so the beneficial effects of arterial flush in LDLT is not well known. The aim of this study was to evaluate the effects of arterial flush of graft in LDLT by using retrograde arterial flush (RGAF) of liver graft which prevented the injury of arterial intima.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Institutional review board of Veterans General Hospital, Taipei, approved on the 16th May 2008

## Study design

Interventional single-blind single centre randomised study

## Primary study design

Interventional

## Secondary study design

Randomised controlled trial

## Study setting(s)

Hospital

## Study type(s)

Treatment

## Participant information sheet

Not available in web format, please use the contact details below to request a patient information sheet

## Health condition(s) or problem(s) studied

Liver transplantation

## Interventions

After complete parenchymal dissection of the donor liver and cutting the bile duct, intravenous heparin (2000 U) was given to the donor. Two minutes after heparin injection, the graft was quickly removed into the iced basin with transient warm ischaemia which was always less than 5 minutes.

In the non-RGAF group, the graft was flushed via the portal vein with 3 times the graft weight (g) of chilled histidine-tryptophan-ketoglutarate (HTK) solution under gravity at a height of 1 metre in the back table. The bile duct and hepatic artery was flushed gently by 5 cc HTK solution using a 24 gauge catheter.

In the RGAF group, the graft was first flushed via the portal vein with 2 times the graft weight (g) of chilled HTK solution as non-RGAF group and then the hepatic vein(s) is (are) clamped by delicate Pott's vascular clamp(s) and the graft was flushed via the portal vein with 500 cc chilled HTK solution (200 cc for left lateral segment). Then the vascular clamp(s) was (were) released.

The procedure of retrograde flush was repeated until the effluent from hepatic vein became clear. The bile duct was flushed gently by 5 cc HTK solution using a 24 gauge catheter. For both groups, the reconstructions of the vessels and bile ducts of the graft were performed thereafter if necessary.

## **Intervention Type**

Procedure/Surgery

## **Phase**

Not Applicable

## **Primary outcome measure**

1. Intra-operative haemodynamic changes
2. One-month post-transplantational liver function tests
3. Occurrence rates of acute cellular rejection within first month after transplantation
4. Immediate preservation injuries of the graft livers by retrograde arterial perfusion

## **Secondary outcome measures**

1. Rates of vascular and biliary complications
2. Length of post-operative hospital stay
3. Graft and patient survival rates

## **Overall study start date**

20/06/2006

## **Completion date**

10/10/2010

# **Eligibility**

## **Key inclusion criteria**

1. Donors' ages range from 18 to 65 years
2. Recipients' aged under 70 years according to the law in Taiwan

## **Participant type(s)**

Patient

## **Age group**

Adult

## **Lower age limit**

18 Years

## **Sex**

Both

**Target number of participants**

60

**Key exclusion criteria**

1. Retransplantation
2. Small- or large-sized grafts (graft-versus-recipient weight ratio, GRWR less than 0.8%, or greater than 5%)
3. Recipients with complete portal vein thrombosis
4. Recipients needing renal replacement therapy before LDT

**Date of first enrolment**

20/06/2006

**Date of final enrolment**

10/10/2010

**Locations****Countries of recruitment**

Taiwan

**Study participating centre**

No. 201, Sec. 2, Shih-Pai Rd.

Taipei

Taiwan

112

**Sponsor information****Organisation**

Taipei Veterans General Hospital (Taiwan)

**Sponsor details**

c/o Chen-Hsen Lee

Chairman Institutional Review Board

No. 201, Sec. 2, Shih-Pai Rd.

Taipei

Taiwan

112

**Sponsor type**

Hospital/treatment centre

**Website**

<http://homepage.vghtpe.gov.tw/~mre/goodexp/content.htm>

**ROR**

<https://ror.org/03ymy8z76>

## **Funder(s)**

**Funder type**

Hospital/treatment centre

**Funder Name**

Taipei Veterans General Hospital (Taiwan) - research grant (ref: TVGH 98, S22-004)

## **Results and Publications**

**Publication and dissemination plan**

Not provided at time of registration

**Intention to publish date**

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**

Not provided at time of registration