In the absence of liver transplantation, end stage liver disease carries a very poor prognosis in Sri Lanka. Currently, living donor transplantation abroad is the only chance for survival, but is financially prohibitive to most. We report the first successful liver transplant in Sri Lanka.

A 49-year old, 50 kg man with end stage liver disease was referred to the Colombo University Surgical Unit for liver transplantation in March 2010. He had haematemesis and encephalopathy having had worsening ascites in the previous two months. This previously alcoholic man had been abstinent since July 2009.

Examination showed a shrunken liver and the spleen was palpable 6 cm below the left costal margin. Routine haematology and biochemistry confirmed impairment of both liver and renal functions. His serum virology (Hepatitis A, B, C and HIV) was negative and tumour markers (alpha-fetoprotein, carcinoembryonic antigen, CA19/9) were not significantly elevated. Triphasic CT excluded hepatocellular carcinoma and confirmed portal vein patency.

The Model for End-stage Liver Disease (MELD) derives a disease severity score (6-40) predicting the 90 day mortality and is used for prioritising patients on the transplant waiting list [1]. In this instance the MELD score \[3.8 \times \log_{e}(\text{bilirubin}, 2.6 \text{mg/dL}) + 11.2 \times \log_{e}(\text{INR, 2}) + 9.6 \times \log_{e}(\text{creatinine}, 1.8 \text{mg/dl})\] was 23 with a predicted 90 day mortality of 35%, a strong justification for liver transplantation. Furthermore, he was psychologically stable with adequate social support making him a suitable candidate.

Being unable to find a suitable living donor and bear the high financial cost for liver transplantation abroad, he consented to be the first liver recipient in Sri Lanka. While awaiting a donor liver, he experienced an episode of spontaneous bacterial peritonitis, encephalopathy and six episodes of hepatorenal syndrome. He was managed with peritoneal paracentesis, antibiotics, human albumin, salt-free diet, diuretics, beta blockers, proton pump inhibitors, vitamin K and lactulose.

On 26 June 2010, we were informed of a previously well 41-year old road accident victim who was 'brain stem dead' from head injuries. He had no truncal injuries and was haemodynamically stable. The blood group was compatible and virology negative. His family consented for organ donation.

Having obtained the necessary legal authorisation, we proceeded to retrieve the liver using histidine, tryptophan, ketoglutarate (Cutodial®, HTK) cold preservative solution on 27 June 2010. The recipient operation commenced shortly after, under general anaesthesia with invasive monitoring. The cirrhotic liver was explanted and the whole donor liver was transplanted orthotopically.

The donor vena cava was anastomosed in a 'piggy back' fashion. End to end anastomoses were carried out for the portal vein, hepatic artery and the common bile duct in that order. The total anhepatic time was 150 minutes. The liver perfused well and haemodynamic stability was maintained with transfusion of 28 packs each of red cells, plasma and platelets.

Immunosuppression was induced with methylprednisolone and basiliximab and maintained with prednisolone, mycophenolate mofetil and tacrolimus. Postoperative recovery was complicated by staphylococcal septicemia which responded to antibiotics. The liver enzymes and INR declined after 24 hours and normalised within the first week. Serial sonography confirmed good perfusion and biliary drainage of the graft. However, transaminases rose on day 20 and a biopsy confirmed mild rejection (Banff score 4) [2]. This was successfully treated with methylprednisolone pulsing. The transaminases, bilirubin, albumin and INR were all normal when he was sent home on day 28.

He remains well with normal liver biochemistry and sonography 8 months after transplantation on low dose maintenance immunosuppression and has returned to full time employment.

Although kidney transplantation has been practiced in Sri Lanka since 1985 [3] current facilities for liver transplantation are inadequate in our hospitals. Availability of modern facilities for intra-operative autotransfusion ('Cell Saver') and coagulation monitoring (thromboelastography) would have significantly reduced transfusion requirements and minimised risks to our patient [4,5]. If we are to provide a regular liver transplantation service that fulfills the needs of our population, dedicated up to date facilities are required.

References
To the Editors:

Ultrasonographic visualisation of live Wuchereria bancrofti adult worms in situ

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Introduction

Living W. bancrofti adult worms were visualised in their natural habitats for the first time in 1994 using ultrasonography [1]. Subsequent studies have shown that adult filarial worms can be visualised in the superficial lymphatics of men, women and children with bancroftian or brugian filariasis [2,3]. Ultrasonic visualisation is possible because the worms move actively inside the lymphatic vessel and this peculiar pattern of movement is called the 'filarial dance sign' (FDS). Sequential ultrasonic examinations have revealed the stability of the location of these adult worm nests [4].

We visualised adult filarial worms in the intra-scrotal lymphatics of two microfilaraemic males using a 7.5 MHz soft tissue transducer (Toshiba) and a semi portable ultrasound machine. Both cases of microfilaraemia were detected during a night blood screening programme conducted in September 2009. Both microfilaraemics were in their mid-thirties and were long term residents of Ragama with microfilaria (mf) counts of 20/20 μl of blood.

Case 1 had bilateral lower limb lymphoedema and a past history of hydrocelectomy while case 2 was asymptomatic. They were subjected to scrotal ultrasound examination during daytime. Two 'worm nests,' i.e. dilated lymphatics with characteristic pattern of movement of worms, were visualised in case 1 while case 2 had a single worm nest and subclinical bilateral hydroceles detected by sonography. Every worm nest detected in the two-dimensional b-mode search (which shows the worm movement against time or the 'filarial dance sign') was confirmed by one-dimensional m-mode imaging where moving worms were seen as wavy bands. The ultrasound findings were documented by digital photographs and digital video sequences. The latter may be viewed at: http:/174.132.189.92/~medkel/medkel.kln/dept/parasit/parasit.htm?clips.html.

Species identification based on morphology of mf on Giemsa stained thick blood films and detection of circulating filarial antigens by immunochromatography using NOW® Filariasis rapid test for W. bancrofti antigen (Binax, Inc. USA) confirmed the infecting species as W. bancrofti.

Thus ultrasonographic visualisation of adult filarial worms is a potential non-invasive diagnostic tool and may be useful in assessing the efficacy of filaricidal drugs. Despite the completion of a five year mass drug administration programme by the Ministry of Health in 2007, there are still patients with active lymphatic filariasis, who are sources of infection for continued transmission of bancroftian filariasis in Sri Lanka.

References
