



The 4th PanArab Liver Transplantation Congress

2-3 April 2010

Regency Hotel Gammarth, Tunisia





The 4th PanArab Liver Transplantation Congress

**Under the Patronage of
His Excellency the president of the republic
ZINE AL ABIDINE BEN ALI**

**The Official Congress of the PanArab Liver Transplantation Society (PALTS)
2 – 3 April 2010, Regency hotel Gammarth-TUNISIA**

SCIENTIFIC COMMITTEE

<i>Honorary Presiden</i>	Mohamed Gueddiche
<i>President</i>	Mohamed Tahar Khalfallah
<i>General Secretary</i>	Mohamed Sami Mbazaa
<i>Treasurer</i>	Nafaa Arfa

SCIENTIFIC COMMITTEE

Hafedh Mestiri
Mohamed Salah Ben Amar
Najet Bel Haj Brik
Ahmed Maherzi
Nabil Ben Mami
Lotfi Hendaoui
Saber Mannai
Nabil Frikha
Lobna Marsaoui

ORGANIZING COMMITTEE

Lassaad Gharbi
Mohamed Chebil
Mustapha Ferjani
Msaddak Azouz
Leila Ben Farhat
Sadri Ben Abid
Nizar Miloudi



PALTS BOARDS OF DIRECTORS

<i>President</i>	Ibrahim Marwan (EGYPT)
<i>Secretary</i>	Ibrahim Mustafa (EGYPT)
<i>Treasurer</i>	Alaa Fayez Hamza (EGYPT)
<i>Immediate-Past-President</i>	Mohammed Al Sebayel (KSA)
<i>President-Elect</i>	Atef Al-Bassas (KSA)
<i>Councilor-at-Large</i>	Hatem Khalaf (KSA/Egypt)
	Mahmoud El-Meteini (Egypt)
	Massimo Malago (UK)
	Ayman Abdo (KSA)
	Adel Hosny (Egypt)
	Ayman Yosry (Egypt)

SPONSORSHIP COMMITTEE

INVITED INTERNATIONAL SPEAKERS

Kareem ABUL - MAGD . Pittsburg (USA)
Karim BOUDJEMA . Rennes (France)
Jacques BELGHITHI . Clichy (France)
Xavier ROGIERS . Ghent (Belgium)
Marco SPADA . Palermo (Italy)
Giovanni VIZZINI . Palermo (Italy)
Koichi TANAKA . Kyoto (Japan)



SCIENTIFIC PROGRAMME

First Day

Friday 2 April 2010

Plenary Session I

09:00 - 10:30 : Adult Living Liver Transplantation

M Spada (Palermo)

09:00 - 10:30 : Multivisceral Transplantation

K Abul-Elmagd (Pittsburgh)

09:00 - 10:30 : Management of Portomesenteric Venous Thrombosis

K Abul-Elmagd (Pittsburgh)

10:30 - 11:00 Coffee Break

Plenary Session II

11:00 - 12:45 : Liver Splitting for Transplantation

X Rogiers (Gent)

11:00 - 12:45 : Small-For-Size syndrome

K Tanaka (Kobe)

11:00 - 12:45 : Long-term outcomes and hemodynamic changes after hemi-porto-caval shunt in recipients with small for size syndrome

Yamada (Kobe)

11:00 - 12:45 : Video Presentation (VP1): Total hepatectomy with caval flow preservation by left-to-right approach

F Fetiriche - J Belghiti (Clichy)

12:45 - 14:00 Lunch Break

Plenary Session III

14:00 - 15:30 : Can we enlarge the indications of LTX for HCC

S Mannai MT Khalfallah (La Marsa)

14:00 - 15:30 : Neoadjuvant treatments for HCC before LTX

M Al-Sebayel (Riyadh)

14:00 - 15:30 : LTX for no-HCC primary neoplasm

J Belghiti (Beaujon)

15:30 - 16:00 Coffee Break



Plenary Session IV

16:00 - 18:00 : Liver Transplantation in the Arab World

18:00 OPENING CEREMONY

Congress Dinner At the Regency Hotel

Second Day

Saturday 3 April 2010

Plenary Session VI

08:30 - 10:30 : The Euro transplant liver allocation system: strengths and weakness

X Rogiers (Gent)

08:30 - 10:30 : Economic Incentives as an Alternative to the Altruistic Procurement Policy to Increase Organ Donation

M Al-Sebayel (Riyadh)

08:30 - 10:30 : Living donor: ethical considerations: The pro & con

J Belghiti (Clichy)

10:30 - 11:00 Coffee Break

Plenary Session V

CNPTO & ATSADO DAY

11:00 - 13:00 : Can we reduce the incidence of calcineurin inhibitors side effects ?

K Boudjema (Rennes)

11:00 - 13:00 : New trends in organ preservation against cold ischemia reperfusion injury

J Rosello-Catafau (Barcelona)

11:00 - 13:00 : LTX for HBV-related cirrhosis: New strategies for recurrence and prevention

J Belghiti (Clichy)

11:00 - 13:00 : HCV: Where are we?

I Mustafa (Egypt)

13:00 - 14:00 Lunch Break



Plenary Session VI

Free Presentations I

OP 1[®]6

14:00 - 15:30 : Pediatric LTX : current indications and outcome

AF Hamza (Egypt)

14:00 - 15:30 : Pediatric LTX : Technical issues

M Spada (Palermo)

14:00 - 15:30 : LTX for children in Tunisia

A Maherzy (La Marsa)

15:30 - 16:00 Coffee Break

14:00 - 15:30 : Pediatric LTX : current indications and outcome

AF Hamza (Egypt)

14:00 - 15:30 : Pediatric LTX : Technical issues

M Spada (Palermo)

14:00 - 15:30 : LTX for children in Tunisia

A Maherzy (La Marsa)

16:00 - 17:30

Free Presentations II

OP 7[®]12

16:00 - 17:30

Free Presentations III

OP 13[®]17

18:00 PALTS General Assembly Meeting



OP 01

Title : The Art and Science of Timing Liver Transplantation

Authors : *Hesham Abdeldayem*
National Liver Institute , Egypt

The timing of LT is an important, yet difficult, issue. Timing depends on understanding the natural history of the patient's disease, as well as patient-specific factors. LT should be performed before the patient has experienced complications that endanger life and early enough so that a satisfactory outcome is probable. However, LT should not be performed too early given the shortage of organs, the risk of surgery, and the cost and risks associated with chronic immunosuppression. LT should be timed by combining the best objective prognostic data with subjective assessment of the individual patient. Patients who are too well should not be transplanted. Likewise, transplantation of patients who are too sick is associated with poor outcomes. Since the goal of transplantation is to prolong survival, LT should be performed at the time point when the patient is expected to have greater survival with a liver transplant than without. While there is some art to predicting such timing, recent work has provided a more scientific basis for this and led to implementation of data-driven method of organ allocation scoring systems. An optimal system would allocate organs based on medical need and the natural history of the patient's disease using objective criteria. Issues with regard to timing are less complicated in patients undergoing LDLT since the transplant recipient typically identifies a donor, and the transplant is carried out in a controlled. However, it is the policy of many centers that patients being considered for LDLT must continue to meet the general criteria for deceased donor (DD) transplantation. That is to say, the patient's predicted survival should be prolonged by transplantation. This is particularly important for LDLT since this procedure puts a healthy donor at risk. It is almost never too early to refer a patient for evaluation. If the patient is not ill enough to be considered, the outcome is that the patient can be reassured and followed up. On the other hand, if the patient is referred too late, death while awaiting transplantation is a distinct possibility. Thus, from a practical standpoint, a patient who has any evidence of clinically advanced liver should be immediately considered for transplantation.



OP 02

Title: Liver Transplantation for Hepatocellular Carcinoma: Where Do We Stand?

Authors : *Essam Hammad, Ibrahim Marwan, Tarek Ibrahim, Hesham Abdel Daiem, Hany Shoreim, Osama Hegazy, Sherif Saleh.*

Work Address : *Surgey Department, National Liver Institute, Menoufiya University, Egypt.*

Hepatocellular carcinoma (HCC) is an aggressive tumor that often occurs in the setting of chronic liver disease and cirrhosis. The optimal treatment options are resection in patients with non- or minimally cirrhotic livers, and liver transplantation for those with more advanced cirrhosis. . Liver transplantation for treatment of HCC is attractive because resection of the malignant tumor can be achieved while also replacing the cirrhotic liver that remains at risk for the development of new lesions. Early experience with transplantation for patients with unresectable local HCC was disappointing. Recently an increasing number of studies suggested that liver transplantation was as effective, and possibly more effective than alternative therapies in carefully selected subgroups of patients. The Milan criteria and have been widely applied around the world in the selection of patients with HCC for liver transplantation. Considerable interest has arisen in expansion of these transplant criteria in highly specialized centers. When HCC was associated with cirrhosis, survival rates after OLT were significantly better than those after resection. For patients with HCC, prolonged waiting often results in tumor growth (which may result in disqualification from OLT). A supplemental system for prioritization was developed that would provide these patients access to an allograft before their HCC progresses beyond the Milan criteria. Many centers are pursuing the strategy of TACE, initial resection, or ablation as a bridging therapy for patients who are on the transplant waiting list.

Living donor liver transplantation (LDLT) provides the opportunity to avoid the extended waiting period for a deceased donor organ. If a suitable and willing donor is identified, and the patient is otherwise eligible for transplantation, this approach is a reasonable alternative to waiting six to 12 months for a deceased donor graft. Thirteen patients with HCC were subjected to (LDLT) at the Surgery Department ,National Liver Institute, Menoufiya University, Egypt and their data will be displayed.



OP 03

Title : Liver transplantation in patients with hepatocellular carcinoma (HCC): single center experience

Authors : *Ayman Azzam, Bassem Hegab, Hatem Khalaf, Mohamed Al Sebayel, Mohammad Al Sofayan, Mohammed Al Saghier, Monther Kabbani, Hamad Al Bahili, Yasser El-Sheikh, Abdulsalam Al Sharabi*
Liver transplantation and hepatobiliary-pancreatic surgery department, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia

BACKGROUND: Liver transplantation has become one of the best treatment options for early hepatocellular carcinoma in cirrhosis

OBJECTIVE: Study the results of liver transplantation in patients with HCC and to express our institutional experience and to evaluate the outcome of the patients **METHODS:** A total of 245 recipients who underwent liver transplantation from April 2001 to January 2010. One hundred and sixty eight patients underwent deceased donor liver transplantation (DDLT) and 77 living donor liver transplantation (LDLT). Forty nine patients underwent liver transplantation for HCC within Milan criteria.

RESULTS: In the period from the start of the program of liver transplantation in our department from April 2001 till now, 49 patients (20%) underwent liver transplantation for HCC. Eighteen patients (36%) performed from living-related donors and 31 from deceased donors. The patients were 34 males and 15 females. Ages ranged from (5-68 years) median 55. Model for end stage liver disease (MELD) score ranged from (6-40) median 14. All the patients were within the Milan criteria by the preoperative evaluation. Hospital stay ranged (6-338 days) median 14. Operating time range (4-15 hours) median 7.5. Blood transfusion range (0-19 units) median 5. Thirty four complications occurred in 23 patients (46%). Recurrence of HCC in 7 patients (14%), recurrent cholangiocarcinoma in one (2%) accidentally discovered in the etrospe. One cadaveric donor had HbcAB. One etrospe showed macrovascular invasion. Sixteen patients died, 8/49 (16%) from HCC recurrence, one from cholangiocarcinoma recurrence.

CONCLUSION: Apart from the common complications that can occur with any transplantation, still liver transplantation remains the most promising solution for patients with HCC among all the available and represents a corner stone in the management of HCC. It is the only acceptable option for complete eradication of both the disease and the predisposing factor



OP 04

Title : Liver transplantation for primary hyperoxaliuria: Why not?

Authors : *Gargah T, Khelil N, Laabidi K, Zarrouk C, Trabelsi M, Lakhoua MR.
Pédiatric Department, Charles Nicolle Hospital, Tunisia*

Primary hyperoxaliuria type I is an autosomal-recessive disorder characterized by increasing urinary excretion of calcium oxalate, recurrent ulithiasis, nephrocalcinosis, and accumulation of insoluble oxalate throughout the body. Most patients develop end stage renal disease over a short period, and infants usually have the most rapid course. Conventional long-term dialysis is generally regarded as a poor therapeutic alternative because it only prolonges a painful life. All patients die miserably after a few years of increasing morbidity because of progression of extrarenal oxalate deposition. Isolated liver transplantation should be the first-choice treatment in selected patient with Primary hyperoxaliuria type I when renal function is normal. Selection of candidate and timing of procedure remain controversial. In patients having end stage renal disease, liver-kidney transplantation should be planned. Isolated renal transplantation is not recommended because of recurrence of oxalate deposition on the graft. Primary hyperoxaliuria type I is relatively common in our country and in the Maghreb compared to other countries. It is responsible for 13% of end stage renal disease in children in Tunisia versus 0,3 % in Europe and 0,7 % in North America. Porpose only, we have assembled in our department 62 cases during a period of 20 years from 1990 to 2009. Among them, 20 have progressed to the chronic renal failure. Only 8 patients are still alive waiting for hepato-renal transplantation. These data are certainly insufficient and the number of patients is probably much more important because the diagnosis of PHI is often delayed.



OP 0 5

Title : Assesment of liver regeneration in living related donor

Authors : Ibrahim Tarek, Marwan Ibrahim, Aldory Ahmed, Abdeldayem Hesham, Saleh Sherif.

National Liver Institute, Menoufiya University, Egypt.

Donor is the first priority during the procedure of living donor liver transplantation (LDLT). Hepatic regeneration is critical to the success of the procedure and allows the various lobes or segments of liver remaining in the donor or transplanted into the recipient to return to normal size.

In this study an evaluation to the extent of liver regeneration after donor surgery, and the influence of preoperative variables.

Twenty five live liver donors (15 males and 10 females) operated at the National Liver Institute, Menoufiya University, Egypt. Serial monitoring was done regarding serum bilirubin and liver enzymes. Also computerized tomography and volumetric assessment of the liver were done preoperatively as well as at 30 days postoperatively.

The mean preoperative total liver volume was 1386.9cm³. The discrepancies between estimated graft volume and actual graft weight ranged from -300 to +167 cm³. The mean remained liver volume after harvesting was 496 cm³. It increased to 1191 cm³ at postoperative day 30 (POD 30), which was 88.9% of preoperative liver volume. Serum level of ALT and AST peaked at POD 1, whereas total bilirubin peaked at POD 5. And declined thereafter and finally returned to preoperative level at POD 30. The regeneration was significantly different by age and size of the grafts. Postoperative morbidities of the donors were mainly biliary complications (26%) in the form of bile collection and biliary stricture, wound problems (17.4%), pleural effusion and delayed biochemical recovery of liver functions (13%). All were managed by conservative and interventional means except of one case of biliary stricture, which required operative management.

Donor liver regeneration occurred promptly after one month. Meticulous operative and post operative care was done to minimize postoperative complications



OP 06

Title : Pediatric Living Donor Liver Transplantation as a free medical service: National Liver Institute Experience.

Authors : *Hossam Eldeen Soliman M.D., Tarek Ibrahim., M.D., Maher Osman M.D., Osama Hegazy M.D., Hany Shoreim M.D. Sherief Saleh M.D., El-sayed Soliman M.D., Khaled Abuelella M.D., Khaled Yassen M.D., Mohamed Hussein M.D. Magdy Khalil M.D., Khaled Yassein M.D., Hassan Zagla M.D., Mohamed Eltabakh M.sc. Mohsen Salama M.D., Imam Waked M.D., Ibrahim Marwan M.D.*

Department of Hepatobiliary and liver transplantation, Department of Anesthesia and Department of Hepatology, National Liver Institute, Menoufia University, Egypt.

Background: Liver transplantation is a well established treatment for end stage liver diseases. LDLT is an alternative technique in countries where a cadaveric program is lacking. NLI is the only center in Egypt who presents LDLT as a free medical service to pediatric patients.

Aim of the work: is to review the results of LDLTx in the National Liver Institute, Menoufia University.

Patients and methods: Between 28 April 2003 and the end of February 2010, 21 pediatric patients underwent LDLT at the National Liver Institute, Menoufia University. Their age ranged from 0.75 to 17 years. The range of their body weights (BW) were 7.8 – 45.00 kg. The indications of transplantation were Post Hepatic Cirrhosis in 2 cases, Biliary Atresia in 7 cases, Budd Chiari syndrome in 3 cases, Bylar's disease in 2 cases, Congenital hepatic Fibrosis in 2 cases, diffuse hemangiomas in one case and Hepatoplastoma in 1 case. Donor grafts were harvested from a living related donor using a meticulous technique using CUSA/ Bipolar method and was washed out using HTK solution then implanted in the recipient as soon as possible. The grafts used were SII+SIII in 16, S2+S3+Partial segment IV in 3 LT. Lobe in 3. Graft weight (g) was 299.67 ± 124.706 gm (range 110-550). GRWR was 1.9740 ± 0.82768 (Range 0.88- 3.46). CIT was 63.87 ± 23.537 minutes (Range 25-90). WIT was 37.27 ± 10.12 minutes (Range 25-68).

Results: The mean initial hospital stay after LDLT was $43.65 (\pm 27.04)$ days ranging from 16 to 140 days. Nine (30%) patients required further hospitalization ranging in frequency from 1 to 9 times., The mean follow-up period was 12.77 ± 6.25 (Range 6- 34.00). By the end of this study, 14 patients were alive. Conclusion: LDLT is an accepted alternative to cadaveric LTx, results can be improved by better patient selection. LDLT can be presented as a free service in pediatric patients.



OP 07

Title : Donor Morbidity After Living Donation for Liver Transplantation

Authors : *K. Bentabak, N. Debzi, SA. Faraoun, D. Benmoussa, A. Graba, B. Griene, T. Boucekkine, SE. Bendib, JM Bodin and K. Boudjema.*

General Oncologic Surgery and Liver Transplantation Services, Centre Pierre et Marie Curie, University of Algiers, Algiers, Algeria.

Summary : The lack of consensus on how to evaluate surgical complications of donors in live donor liver transplantation and incoherence of cumulative data hampers efficient comparison of the outcome retrospectively. This study sought to use the Clavien classification system to define and grade the severity of these complications.

Patients and methods :

We retrospectively analyzed the outcomes of 30 patients who underwent live donor hepatectomy for adult living donor related liver transplantation between February 2003 and Mars 2010. The complications were stratified according to Clavien's system.

Results :

No deaths occurred. Complications were recognized in 16 donors (54%) : 9 (56%) had 1 complication, 4 (25%) had 2 complications and 3 (19%) had 3 complications. Complications were scored as grade 1 (n=6, 23%), grade 2 (n=13, 50%), grade 3a (n=3, 11.5%) , grade 3b (n= 3, 11.5%) and grade 4a (n=1, 4%). They were minor (grade 1 and 2) in 19 cases (73%) and major (grade 3 and 4) in 7 cases (27%).

Conclusion :

Adult living liver donation was associated with significant donor complications. Although most complications were low-grade severity, a significant proportion were severe or life threatening. Clavien's system is simple and useful to compare surgical outcomes. It may serve as a common tool for the quality assessment in live donor surgery.



OP 08

Title : Living liver donor mortality and morbidity demand genuine transparency: the situation in Egypt

Authors : *Hesham Abdeldayem , Naglaa Allam , Amr Helmy , Hesham Gad , Essam Salah , Amr Sadek , Khaled Abo Eleella , Maher Osman , Bassem Hegab*

National Liver Institute , Egypt

Background: The reluctance to publish a complete account of any death or serious complication among living-liver donors, although understandable in a fraught medicolegal environment, is not good for patient care or liver transplantation. A donor death or serious complication will have a devastating effect not only on the families of the donor and recipient but also on the clinical staff involved. The impact may spread to other potential donors and recipients, and lead to negative publicity and potential economic damage to the transplant center.

Objective: to discuss the mortality and morbidity within living liver donors in Egypt and to try answering the question: What level of risk are the potential donors and the society willing to accept?

Methods: By personal communication and reviewing all published data and reports from centers performing LDLT in Egypt, morbidity and mortality within the donors were analyzed.

Results: From August 2002 to January 2009, the number of living donor liver transplants performed in Egypt topped out to more than 740 procedures in 11 centers. There were two reported donor mortality (0.29%). The first was a 45 year-old male who donated a right lobe to his brother and died of sepsis from bile leak 1 month after donation .The second was a 22 year-old male who donated his right lobe to his father, suffered from massive intraoperative bleeding from the stump of the portal vein and died of multisystem organ failure after 10 days. Donor morbidity included: portal vein thrombosis (0.5%), biliary complications (2%), bleeding (3%), intraabdominal collections (6%), pneumonia (4%) , pleural effusion (22%) , and depression (12%).

Conclusion: Live liver donor morbidity and mortality remains underreported. LDLT programs are best served by collaborative effort between centers reporting accurate information characterized by genuine transparency.



OP 09

Title : Interrupted Microsurgical biliary reconstruction: experience in 30 consecutive cases

Authors : *Hossam Eldeen Soliman M.D., Tarek Ibrahim., M.D., Sherief Saleh M.D.,, Osama Hegazy M.D., Hany Shoreim M.D., El Sayed Soliman., M.D., Khaled Abuelella M.D., Maher Osman, M.D., Bassem Hegab M.D. Ibrahim Salama M.D., Hany Shoreim M.D., Khaled Yassen M.D., Mohamed Hussein M.D. Magdy Khalil M.D., Hassan Zagla M.D., Ibrahim Marwan M.D.*

Department of Hepatobiliary and liver transplantation, Department of Anesthesia and Department of Hepatology, National Liver Institute, Menoufia University, Egypt.

BACKGROUND: living donor liver transplantation is a good alternative in areas without cadaveric transplants. Biliary are common up-to 40-50% of donors. The incidence of biliary complications are high especially in living donor and segmental transplantation.

AIMS: We present our technique of biliary reconstruction of living donor transplants using interrupted microsurgical technique.

PATIENTS AND METHODS: We had performed 30consequative living donor liver transplantation in the department of Surgery, National Liver institute, Menoufia University starting from May 2007 to the end of December August 2009. They were 26 adult and 4 pediatric patients. We used a magnification of 5.5x loupe with interrupted 6/0 prolene or PDS for the anastomosis. We reviewed graft characteristics, operative data, postoperative details including hospital stay, the in-hospital complications and early follow up.

RESULTS: twenty six duct to duct reconstruction and 4 hepatico-jejunostomy were done. The mean anastomotic time was 30 min for each duct. Early bile leak occurred in 4 cases. All were in right lobe graft, 4 all resolved with conservative treatments. Late strictures developed in 5 cases all were successfully dilated by ERCP followed by stenting. We used vein grafts in 14 out of 34 patients.

CONCLUSIONS: Microsurgical interrupted biliary reconstruction dramatically minimized The incidence of biliary complications in our center.



OP 0 10

Title : Outflow reconstruction using native liver veins in right lobe grafts without MHV harvesting: 3 years experience

Authors : *Hossam Eldeen Soliman M.D., Tarek Ibrahiem., M.D., Maher Osman M.D., Osama Hegazy M.D., Hany Shoreim M.D. Sherief Saleh M.D., Elsayed Soliman M.D., Khaled Abuelella M.D., Khaled Yassen M.D., Mohamed Hussein M.D. Magdy Khalil M.D., Khaled Yassein M.D., Hassan Zagla M.D., Mohamed Eltabakh M.sc. Mohsen Salama M.D., Imam Waked M.D., Ibrahiem Marwan M.D. Department of Hepatobiliary and liver transplantation, Department of Anesthesia and Department of Hepatology, National Liver Institute, Menoufia University, Egypt.*

BACKGROUND: Living donor liver transplantation is a good alternative in areas without cadaveric transplants. Variation of the hepatic veins and portal vein are important factor in determining suitability of grafts for living donation especially as regard donor safety and difficulty in outflow reconstruction due to the lack of suitable vein grafts.

AIMS: We present our experience in vascular reconstruction of living donor transplants using vein grafts from the native liver of the recipient in Rt lobe grafts without MHV harvesting.

PATIENTS AND METHODS: We had performed 66 living donor liver transplantation in the department of Surgery, National Liver institute, Menoufia University starting from 28th of April 2003 to the end of December August 2009. They were 20 pediatric patients and 46 adult patients. We reviewed the preoperative patient's data, graft characteristics, operative data, postoperative details including hospital stay, the in-hospital complications and early follow. Accordingly, we excluded 10 patients with tumors and sex patients with portal vein thrombosis.

RESULTS: in right lobe grafts we used vein grafts in 14 out of 34 patients. We tried to minimize the number of hepatic veins to a maximum of two anastomoses by this technique. Long grafts were obtained from the portal system and the hepatic veins in reconstruction of V5 in 5 patients, V8 in 5 cases, middle hepatic vein in 5 cases, inferior hepatic vein in 2 cases and anterior patch for the right hepatic vein in 8 cases. In two cases we used a recanalized umbilical vein to reconstruct two inferior veins in one patient and V5 in the other. In two cases these grafts were thrombosed postoperatively but the rest were completely functioning postoperatively up to two years after transplantation.

CONCLUSIONS: The native liver of the recipient is a good source for vein grafts in living donor liver transplants in absence of portal vein thrombosis and malignancy.



OP 10

Title : The usefulness of laparoscopic hernia repair in the management of incisional hernias following liver transplantation.

Authors : *Bassem Hegab, Hatem Khalaf, Ayman Azzam, Abdullah Al Sulaimani, Fahad Bamehriz, Abdelrahman Salem, Mohamed Al Sofayan and Mohamed Al Sebayel*

King Faisal specialist Hospital and research center, Riyadh MBC 72. Riyadh 11211, P.O Box 3354

Background: Incisional hernias occur in about 4.6 to 17.2% of patients after liver transplantation. Postoperative wound complications are less frequent after laparoscopic repair while maintaining low recurrence rates. We present our experience in managing this complication. **Patients and Methods:** Prospectively collected data of all patients who underwent deceased or live donor liver transplantation (LDLT) and developed Incisional hernias were analyzed. Following laparoscopic incisional hernia repair, all patients were followed up for a median of 12 months.

Results: A total of 242 liver transplantations were performed in 232 patients (10 re-transplantations) between 2001 and 2009. Sixteen patients developed incisional hernias after primary direct closure of the abdominal wall with an incidence of 6.6%. Out of these 16 patients; 13 (5.4%) were recipients and 3 (1.2%) were donors for LDLT. Two out of the thirteen recipients were re-transplantations. One patient (6.25%) was complicated by intrabdominal haematoma between the mesh and the omentum, which was managed by laparoscopic re-exploration. No recurrence or wound infections occurred.

Conclusion: Laparoscopic incisional hernia repair after liver transplantation is a safe procedure with low risk of infection or recurrence.



OP 12

Title : Portal Vein Thrombosis: Is it contraindication for liver transplantation?

Authors : *Bassem Hegab, Hatem Khalaf, Hamad Al Bahili, Ayman Azzam and Mohamed Al Sebayel.*

Department of Liver Transplantation and Hepatobiliary-Pancreatic Surgery, King Faisal Specialist Hospital and Research Center (KFSH&RC), Riyadh, Saudi Arabia. MBC 72, Riyadh 11211, P.O Box 3354

Background: Portal vein thrombosis (PVT) was once considered a contraindication for Liver transplantation (LT) because of technical difficulties. Though no longer a contraindication, it remains a high risk in end stage liver disease with an incidence varies between 5-15%. We present our experience in managing this complication.

Patients and Methods: Prospectively collected data of all patients who underwent deceased (DDLT) or live donor liver transplantation (LDLT) and had preoperative diagnosis of PVT were analyzed.

Results: A total of 245 liver transplantations (168 DDLT and 77 LDLT) were performed in 235 patients (10 re-transplantations) between April 2001 and January 2010. Two out of 77 LDLT (2.6%) and 3 out of 168 DDLT (1.8%) had preoperative PVT. All of them were grade 3 PVT. Cadaveric jump graft was employed between superior mesenteric vein (SMV) of the recipient and portal vein of the donor. In LDLT, the jump graft was functioning well with no complications. In DDLT, one patient experienced chronic rejection and retransplanted 5 years later. Another patient developed PVT; re-exploration was done, re-anastomosis of PV, then complicated by graft failure and re-transplanted in 2 months period and later died from sepsis and multiple organ failure.

Conclusion: Liver transplantation in patients with portal vein thrombosis is challenging with high risk of stenosis and thrombosis with subsequent graft failure. Proper preoperative diagnosis is important in planning surgical technique in experienced centre. Vigilant post-operative follow up with ultrasound is important in early diagnosis of thrombosis.



OP 13

Title : Biliary complications after Liver Transplantation: A single center experience

Authors : *Bassem Hegab, Ayman Azzam, Hatem Khalaf, and Mohamed Al Sebayel.*

Department of Liver Transplantation and Hepatobiliary-Pancreatic Surgery, King Faisal Specialist Hospital and Research Center (KFSH&RC), Riyadh, Saudi Arabia. MBC 72. Riyadh 11211, P.O Box 3354.

Background: Despite an overall improvement in survival after orthotopic liver transplantation (OLT), biliary complications still remain a significant source of morbidity (6-34%). We present our experience in managing this complication. Patients and Methods: Prospectively collected data of all patients who underwent deceased (DDLT) or live donor liver transplantation (LDLT) and developed biliary complications were analyzed.

Results: A total of 245 liver transplantations (168 DDLT and 77 LDLT) were performed in 235 patients (10 re-transplantations) between April 2001 and January 2010. Twenty seven out of 77 LDLT (35%) and 11 out of 168 DDLT (6.5%) developed biliary complications which varied between biliary leakage with anastomosis breakdown, anastomosis stricture or kink, some patients had more than one complication.

Conclusion: Biliary complications are the Achilles' heel of liver transplantation with serious morbidity and mortality. However, radiological and surgical management of this complication dramatically improve the outcome.



OP 14

Title :High rates of HbsAg clearance and a low rate of HBV recurrence after liver transplantation with lamivudine and/or adefovir combined with long term HBIg prophylaxis.

Authors : *Al-hamoudi W1,2, Allam N2, Alawi K1, Mohamed H2, Kamel Y2, Al-Masri N2, Abaalkhail F2, Al-Sofayan M2, Khalaf H2, Al-Sebayel M2, Aljedai A2, Abdo A1,2.*

1Gastroenterology and Hepatology, King Saud University, 2Liver Transplant Unit, King Faisal Specialist Hospital and research Center, Riyadh, Saudi Arabia

Background/Aims: The use of hepatitis B immunoglobulin (HBIg) and lamivudine resulted in a significant reduction in hepatitis B virus (HBV) recurrence following liver transplantation (LT). The aim of this study was (a) to evaluate the use of lamivudine and/or adefovir in combination with long term intravenous HBIg in preventing disease recurrence and (b) to evaluate the HBV serological markers following LT. **METHODS:** 111 patients who received a liver transplantation for HBV related cirrhosis and were followed in our center from Jan 1990 to December 2009 were included. With the exception of four patients (transplanted prior to 1993) all patients received combination therapy with nucleos(t)ide analogue and HBIg . Breakthrough infection was defined as a re-emergence of HBVDNA or HbsAg while on treatment. Serum viral markers (HbsAg, anti-HBs, HbeAg, anti-Hbc and anti-Hbe) and HBV-DNA level were determined.

RESULTS: Patients were followed for an average of 70 months (range 1-240 months) after LT. 105 patients received lamivudine and/or adefovir in combination with HBIg for an average duration of 27 months (range1-140). 95 patients were on pre-transplant oral antiviral treatment. Prior to transplantation 105 (95%) and 19 (17%) patients were positive for HbsAg and HbeAg, respectively. Following LT 98 (93%) patients cleared the HbsAg while only 5 patients remained HbeAg positive. Post LT survival and HBV recurrence during the follow up period were 92% and 13% respectively. All cases of recurrence occurred on monotherapy and were controlled with switching or adding another agent. Factors associated with disease recurrence

include: a positive HbeAg pretransplant (64%vs15%, $p=0.0001$), detectablepretransplantHBV-DNA(79%vs31%, $p=0.0001$),notinitiatingpretransplant oral treatment (57%vs12%, $p=0.0002$), HBIg duration of less than a year (56%vs17%, $p=0.017$), HbsAg persistence following LT (86%vs2%, $p<0.0001$).

CONCLUSION: This study shows that lamivudine/adefovair combined with long term HBIg is effective and safe in preventing hepatitis B recurrence after liver transplantation and is associated with a high rate of HbsAg clearance.



OP 15

Title : Malignancies after Liver transplantation: A Single Center Experience

Authors : *Hatem Khalaf, Bassem Hegab, Hamad Al Bahili, Ayman Azzam, Yasser Kamel, Hazem Mohammed, Naglaa Allam, Yasser El-Sheikh, Faisal Aba Alkhail, Nasser Al Masri, Waleed Al Hamoudi, Ayman Abdo, Mohammad Al Sofayan, Mohammed Al Sebayel.*

Department of Liver Transplantation and Hepatobiliary-Pancreatic Surgery, King Faisal Specialist Hospital and Research Center (KFSH&RC), Riyadh, Saudi Arabia.

Background: Recurrent liver tumors or De-novo malignancies are of great concern after Liver Transplantation (LT). This concern is due to the need of Immunosuppressive medications which suppress the natural defense mechanisms against tumor formation. Herein, we present our experiences with malignancies encountered after both Deceased (DDLT) and Living liver transplantation (LDLT). Patients & Method: Between April 2001 and December 2009, a total of 242 LT procedures were performed (165 DDLTs and 77 LDLTs) in 232 patients (10 retransplants). Out of these 232 recipients, 48 patients (19.8%) had hepatic focal lesions suspicious of hepatocellular carcinoma (HCC). Almost all patients were within the Milan's criteria except 3 who exceeded the criteria. None of the patients had past history of extrahepatic malignancies. Results: Fourteen patients (6%) had post-liver transplant malignancies. Out of these 14, 8 (47.2%) had de novo extrahepatic malignancies, and 6 (42.8%) had recurrent liver tumors. De-novo malignancies included; (1) Post-liver transplant lymphoproliferative disorders (PTLD) in 4 patients who were all Epstein Bar virus (EBV) positive; two pediatric patients presented with nasopharyngeal masses while the remaining 2 adults presented with abdominal masses, all 4 patients had B-cell type PTLN, all 4 patients were successfully treated by Anti-CD20 monoclonal antibody therapy (Rituximab), reduction of immunosuppression, and control of EBV activity. (2) Urinary bladder cancer in one patient who was treated by radical surgical resection and chemotherapy but unfortunately died from bone and lung metastasis within one year of diagnosis; (3) Endometrial carcinoma in one patient who was treated by radical surgical resection but unfortunately died from aggressive tumor recurrence one year of diagnosis; (4) Kaposi sarcoma in one patient who was successfully treated by surgical excision and reduction of Immunosup



pression. Recurrent liver tumor included (1) recurrent cholangiocarcinoma in 3 patients who had incidental cholangiocarcinoma discovered in explants after LT; all 3 patients presented with abdominal lymphadenopathy proven on histopathological examination to be recurrent cholangiocarcinoma; all 3 patients died with 6 month of diagnosis (2) Recurrent HCC in two patients who exceeded the Milan's criteria; both patients presented with local liver lesions, abdominal lymphadenopathy, and in addition to bone metastasis in one patient proven on histopathological examination to be recurrent HCC; both patients with recurrent liver tumors died within 1 year of diagnosis. Conclusions: In our experience, De Novo malignances after LT are not uncommon and are linked to the need for immunosuppression. EBV-associated PTLN is the most frequently encountered malignancy and is easily treatable by chemotherapy and reduction of immunosuppression. On the other hand; LT for cholangiocarcinoma and HCC outside the Milan's criteria are associated with high rate of tumor recurrence and dismal outcome.



OP 16

Title :Coagulopathy In Liver Transplantation

Authors : *Magdy KHALIL MD. Dip. TQM*

Department of Anaesthesia and ICU, National Liver Institute, Menoufia University, Egypt.

Cirrhotic patients with portal hypertension have a high cardiac output, low systemic vascular resistances and altered distribution of blood volume pooling the splanchnic circulation. Intraoperative blood loss, requiring more than six units of red blood cells (RBCs), has a negative impact on postoperative morbidity and mortality in liver transplantation. In the early era of OLT, a scientific basis was provided for the role of primary hyperfibrinolysis in nonsurgical bleeding mainly during the anhepatic and reperfusion periods. Despite the well known bleeding diathesis and prolonged coagulation tests in patients with liver disease, thromboembolic complications do paradoxically occur in these patients. The thrombotic tendency of patients with liver disease may be explained by the delicately rebalanced haemostatic system. Transfusion of blood products has reached low rates in the last 10 years in many groups. However, there is still high variability between different centers in the use of fresh frozen plasma (FFP), platelets, cryoprecipitate or fibrinogen, antifibrinolytic drugs, desmopressin and other measures such as intraoperative cell-saver and phlebotomy. The trigger to administer RBC is hemoglobin level, but there are also no uniform criteria, and replacement of other blood components are guided by coagulation tests or TEG or both. Although the PT and PTT are conveniently and widely performed, there are some of the difficulties in using these tests to assess coagulopathy. Correlations with factor levels are nonlinear, with the assays showing more change at very low levels and less change as the factor levels approach normal. This effect is seen when plasma is given for very high PT and PTT values (low factors); small doses of plasma initially bring down the PT and PTT greatly, but less effect per plasma unit on the PT and PTT is achieved as the values come down. The PT is more sensitive to factor VII than to other factors. Multiple mild factor deficiencies, as might occur in liver disease, cause more abnormal PT and PTT results than with single but more severe factor deficiencies.



OP 17

Title : Pegylated Interferon Alfa-2a and Ribavirin For The Treatment Of Genotype-4 Recurrent Hepatitis C After Liver Transplantation

Authors : *Al-hamoudi W1,2, Mohamed H2, Kamel Y2, Al-Masri N2, Abaalkhail F2, Al-Sofayan M2, Khalaf H2, Al-Sebayel M2, Aljedai A2, Abdo A1,2 Gastroenterology and Hepatology, King Saud University, 2Liver Transplant Unit, King Faisal Specialist Hospital and research Center, Riyadh, Saudi Arabia.*

Background/aims: Hepatitis C virus (HCV) recurrence after liver transplantation (LT) is universal and tends to be more aggressive. Data on post transplant genotype-4 HCV treatment is lacking. The aim of this study is to assess the safety and efficacy of Pegylated interferon alpha-2a (PEG-IFN) and ribavirin in treating recurrent HCV genotype-4 after LT.

Methods: Twenty five patients infected with genotype-4 HCV were treated with PEG-IFN at a dose of 180 microg/week plus ribavirin 800 mg/day, the dose was adjusted as tolerated during the treatment period (range 400-1200 mg). Pretreatment liver biopsies were obtained from all patients. Serum alanine amino transferases (ALT) and viral loads were assessed before, during, and after treatment.

Results: Twenty two patients (88%) achieved an early virological response (EVR) (twelve patients tested HCV-RNA negative), of those fifteen (60%) and fourteen patients (56%) achieved end of treatment virological response (ETVR) and sustained virological response (SVR) respectively. Treatment was started 1-72 months (median 6 months) following LT. Five patients had advanced pretreatment liver fibrosis. Pretreatment ALT were elevated in twenty four patients (96%). Among those who achieved SVR thirteen patients (92%) had a normal post-treatment ALT vs seven patients (64%) in those who did not achieve SVR. All patients experienced treatment related side effects. The most common adverse effects were flu like illness and cytopenias. Eighteen patients (72%) used erythropoietin and/or granulocyte-colony stimulating factor as a supportive measure. One patient developed severe rejection complicated by sepsis, renal failure, and death. Other adverse effects included depression, mild rejection, impotence, itching and vitiligo.

Conclusion: Early post-transplant treatment with Pegylated interferon alpha-2a and ribavirin achieved SVR in 56% of liver transplant recipients with chronic genotype-4 HCV infection. The combination was relatively safe, with a low rate of treatment withdrawal.



OP 18

Title :Coagulopathy In Liver Transplantation

Authors : *Magdy KHALIL MD. Dip. TQM*

Department of Anaesthesia and ICU, National Liver Institute, Menoufia University, Egypt.

Cirrhotic patients with portal hypertension have a high cardiac output, low systemic vascular resistances and altered distribution of blood volume pooling the splanchnic circulation. Intraoperative blood loss, requiring more than six units of red blood cells (RBCs), has a negative impact on postoperative morbidity and mortality in liver transplantation. In the early era of OLT, a scientific basis was provided for the role of primary hyperfibrinolysis in nonsurgical bleeding mainly during the anhepatic and reperfusion periods. Despite the well known bleeding diathesis and prolonged coagulation tests in patients with liver disease, thromboembolic complications do paradoxically occur in these patients. The thrombotic tendency of patients with liver disease may be explained by the delicately rebalanced haemostatic system. Transfusion of blood products has reached low rates in the last 10 years in many groups. However, there is still high variability between different centers in the use of fresh frozen plasma (FFP), platelets, cryoprecipitate or fibrinogen, antifibrinolytic drugs, desmopressin and other measures such as intraoperative cell-saver and phlebotomy. The trigger to administer RBC is hemoglobin level, but there are also no uniform criteria, and replacement of other blood components are guided by coagulation tests or TEG or both. Although the PT and PTT are conveniently and widely performed, there are some of the difficulties in using these tests to assess coagulopathy. Correlations with factor levels are nonlinear, with the assays showing more change at very low levels and less change as the factor levels approach normal. This effect is seen when plasma is given for very high PT and PTT values (low factors); small doses of plasma initially bring down the PT and PTT greatly, but less effect per plasma unit on the PT and PTT is achieved as the values come down. The PT is more sensitive to factor VII than to other factors. Multiple mild factor deficiencies, as might occur in liver disease, cause more abnormal PT and PTT results than with single but more severe factor deficiencies.



OP 19

Title : Pegylated Interferon Alfa-2a and Ribavirin For The Treatment Of Genotype-4 Recurrent Hepatitis C After Liver Transplantation

Authors : *Al-hamoudi W1,2, Mohamed H2, Kamel Y2, Al-Masri N2, Abaalk-hail F2, Al-Sofayan M2, Khalaf H2, Al-Sebayel M2, Aljedai A2, Abdo A1,2 Gastroenterology and Hepatology, King Saud University, 2Liver Transplant Unit, King Faisal Specialist Hospital and research Center, Riyadh, Saudi Arabia.*

Background/aims: Hepatitis C virus (HCV) recurrence after liver transplantation (LT) is universal and tends to be more aggressive. Data on post transplant genotype-4 HCV treatment is lacking. The aim of this study is to assess the safety and efficacy of Pegylated interferon alpha-2a (PEG-IFN) and ribavirin in treating recurrent HCV genotype-4 after LT.

Methods: Twenty five patients infected with genotype-4 HCV were treated with PEG-IFN at a dose of 180 microg/week plus ribavirin 800 mg/day, the dose was adjusted as tolerated during the treatment period (range 400-1200 mg). Pretreatment liver biopsies were obtained from all patients. Serum alanine amino transferases (ALT) and viral loads were assessed before, during, and after treatment.

Results: Twenty two patients (88%) achieved an early virological response (EVR) (twelve patients tested HCV-RNA negative), of those fifteen (60%) and fourteen patients (56%) achieved end of treatment virological response (ETVR) and sustained virological response (SVR) respectively. Treatment was started 1-72 months (median 6 months) following LT. Five patients had advanced pretreatment liver fibrosis. Pretreatment ALT were elevated in twenty four patients (96%). Among those who achieved SVR thirteen patients (92%) had a normal post-treatment ALT vs seven patients (64%) in those who did not achieve SVR. All patients experienced treatment related side effects. The most common adverse effects were flu like illness and cytopenias. Eighteen patients (72%) used erythropoietin and/or granulocyte-colony stimulating factor as a supportive measure. One patient developed severe rejection complicated by sepsis, renal failure, and death. Other adverse effects included depression, mild rejection, impotence, itching and vitiligo.

Conclusion: Early post-transplant treatment with Pegylated interferon alpha-2a and ribavirin achieved SVR in 56% of liver transplant recipients with chronic genotype-4 HCV infection. The combination was relatively safe, with a low rate of treatment withdrawal.



PP1

Title :Predictors of recipients' mortality after living donor liver transplantation

Authors : *Hany Shoreem, Amr Mohamed Helmy, Tarek Mohamed Ibrahim, El-Sayed Ahmed Abdel Hfiz Soliman, Hesham Mohamed Abdel Dayem*
National Liver Institute, Egypt

In this study, our aim was to evaluate the factors associated with recipients mortality of a series of patients underwent LDLT at National Liver Institute Hospital, and to assess and compare the pretransplantation MELD and CTP scores whether they predict recipients mortality or not. Different preoperative, intraoperative, and postoperative variables previously identified as potential predictors of post-LT mortality or assumed to affect the outcome of liver transplantation were included in this study.

By 1st month; graft type and ICU stay >19 days were significant risk factors of mortality in the univariate analysis, but not found to be independent predictors of mortality in multivariate analysis. By 6 month; recipient age >40 year, indication of liver transplantation, WIT ≥ 35 minute and ICU stay >11 day were significant risk factors of mortality in the univariate analysis, but not found to be independent predictors of mortality in multivariate analysis. ROC curve were plotted for both Child and MELD scores at 1st month and 6 month. The curves compared at both time frame of mortality in the purpose to assess its ability to predict mortality at a given time. There was no statistically significant difference between the posttransplant survivals in the three Child classes & in different MELD groups (p value >0.05). So Child class and MELD score did not affect patients' survival at 1st month and 6 months post LDLT transplantation. The recipients' posttransplant survivals were plotted using Kaplan-Meier analysis at the end of 1st & 6 months. There was no significant difference in patients' survival as regard different Child classes and different MELD strata, neither at 1st nor 6 months post transplantation



PP2

Title Adult Living Liver Transplantation: Preoperative Multidetector CT

Authors : *Khaled FAKHFAKH, Yessine GUERMAZI, Wafik TURKI, Sondes HADDAR, Chaouki DABBECHÉ, Hanene ABID, Emna DAOUD*, Zeineb MNIF*, Jameleddine MNIF*

*Department of Radiology, Habib Bourguiba Hospital, *Hedi Chaker Hospital*

OBJECTIVE

Because of the severe shortage of cadaveric livers, transplantation surgeons are now performing Living adult right lobe liver transplantation and removal of the right lobe of the liver must be accomplished without endangering the vascular supply or metabolic function of the remaining left lobe. This study was performed to document the impact of multidetector multiphase CT in facilitating patient selection and surgical planning in potential donors.

MATERIELS AND METHODS

Preoperative imaging plays an important role in patient selection and surgical planning. Multidetector CT angiography provides a complete evaluation of the liver as well as the hepatic vascular anatomy in adult living donor liver transplantation candidates. The occurrence of the conventional classic vascular anatomy is uncommon, and some form of important hepatic vascular variation is to be expected in most candidates. MDCT scans as well as maximum intensity projections and three-dimensional volume renderings accurately depict the vascular anatomy in a form that is helpful to the transplantation surgeon. In addition, the donor's liver parenchyma must be examined for size, shape (of right and left lobes), incidental lesions, fatty infiltration, or other abnormalities. Knowledge of total and segmental liver volume is equally important to avoid donor-recipient volume mismatch, which may cause graft failure. In potential donors, sufficient left lobe liver volume must be maintained to permit metabolic function during regeneration. Also, the resected right lobe should be large enough to meet the recipient's metabolic demand.

CONCLUSION

Multidetector multiphase CT provided comprehensive parenchymal, vascular, and volumetric preoperative evaluation of potential donors undergoing living adult right lobe liver transplantation.



PP2

Title :Early Doppler Ultrasonography after liver transplantation

Authors : *Khaled FAKHFAKH, Wafik TURKI, Yessine GUERMAZI, Hela FOU-RATI*, Chaouki DABBECHÉ, Kheireddine BEN MAHFOUDH, Emna DAOUD*, Zeineb MNIF*, Jameleddine MNIF*

*Departments of Radiology, Habib Bourguiba hospital,*Hedi Chaker hospital*

OBJECTIVE

Liver transplantation is currently an accepted first-line treatment for patients with end-stage acute or chronic liver disease, but postoperative complications may limit the long-term success of transplantation. The purpose of this poster is to describe the hepatic Doppler Ultrasonography findings in the early posttransplantation period, both in the absence and presence of complications.

MATERIALS AND METHODS

Early detection of post-operative complications is essential for graft and patient survival. Graft loss is a serious problem because of the complexity of the surgical procedures and the short age of livers available for transplantation. Clinical signs of complications often are nonspecific, and diagnoses frequently are based on imaging findings. Ultrasonography is the preferred post operative screening method because it is cost-effective, accessible, noninvasive, and easily performed at bedside. The most common and most clinically significant early complications are arterial and venous thrombosis and stenosis, biliary disorders, fluid collections, and graft rejection. Early diagnosis is crucial to the successful management of all these complications, and doppler ultrasonography plays an important role in the diagnosis of all but graft rejection. This poster describes the imaging appearances of the most common and most significant early post operative complications after liver transplantation: vascular disorders, biliary disorders and fluid collections. Graft rejection, which is perhaps the most important complication, is considered only briefly because imaging plays no role in its diagnosis.

CONCLUSION

Doppler ultrasonography performed routinely in the first 3 days after liver transplantation may permit early detection of complications even before clinical indications. This allows hepatic intervention before liver function damage, improving graft rescue and patient prognosis.



PP3

Title Adult Living Liver Transplantation: Preoperative Multidetector CT

Authors : *Khaled FAKHFAKH, Yessine GUERMAZI, Wafik TURKI, Sondes HADDAR, Chaouki DABBECHÉ, Hanene ABID, Emna DAOUD*, Zeineb MNIF*, Jameleddine MNIF*

*Department of Radiology, Habib Bourguiba Hospital, *Hedi Chaker Hospital*

OBJECTIVE

Because of the severe shortage of cadaveric livers, transplantation surgeons are now performing Living adult right lobe liver transplantation and removal of the right lobe of the liver must be accomplished without endangering the vascular supply or metabolic function of the remaining left lobe. This study was performed to document the impact of multidetector multiphase CT in facilitating patient selection and surgical planning in potential donors.

MATERIELS AND METHODS

Preoperative imaging plays an important role in patient selection and surgical planning. Multidetector CT angiography provides a complete evaluation of the liver as well as the hepatic vascular anatomy in adult living donor liver transplantation candidates. The occurrence of the conventional classic vascular anatomy is uncommon, and some form of important hepatic vascular variation is to be expected in most candidates. MDCT scans as well as maximum intensity projections and three-dimensional volume renderings accurately depict the vascular anatomy in a form that is helpful to the transplantation surgeon. In addition, the donor's liver parenchyma must be examined for size, shape (of right and left lobes), incidental lesions, fatty infiltration, or other abnormalities. Knowledge of total and segmental liver volume is equally important to avoid donor-recipient volume mismatch, which may cause graft failure. In potential donors, sufficient left lobe liver volume must be maintained to permit metabolic function during regeneration. Also, the resected right lobe should be large enough to meet the recipient's metabolic demand.

CONCLUSION

Multidetector multiphase CT provided comprehensive parenchymal, vascular, and volumetric preoperative evaluation of potential donors undergoing living adult right lobe liver transplantation.



PP4

Title :Cystatin C Vs Creatinine related e-GFR as Predictor of Death on the Pre- liver Transplantation Population

Authors : Kamel Y, Hassan H, Azzam A, Hegab B, Almassri N, Abalkhail F, Abdo A, Alhomodi W, Khalaf H

Liver transplantation & Hepatobiliary Surgery Dept., KFSH&RC. Riyadh, KSA

Introduction

Serum creatinine is a component of the MELD score prioritizing patients on the waiting list. Cystatin C and related e-GFR has been proposed as a better surrogate marker for kidney function in patients with liver cirrhosis than creatinine.

Aim

To compare serum creatinine related e-GFR (cr e-GFR) with Cystatin C related e-GFR (Cye-GFR) as predictors of mortality in patients pretransplantation.

Methods

96 adults listable for liver transplantation as all had ESLD with MELD score ≥ 9 (cr e-GFR) was calculated using the MDRD 4 variable equation, while (Cye-GFR) was calculated using Larsson formula. Renal dysfunction was labeled when e-GFR < 90 mL/min/1.73m². Pearson correlation, Logistic regression was used to assess the association of variables with 3-month waiting list mortality.

Results

Mean age was 47.58 ± 13.56 years (male: female (61:35)). The median listing MELD score was 18 (range 9-40) 23 (23.96% died prior to transplantation within the first 3 months. Nineteen (19.79%) patients were transplanted within 3 months. According to Cye e-GFR 77 (80.2%) had renal impairment vs. 47 (48.96%) when cr e-GFR was used. The median listing cr e-GFR was 83.93 (interquartile range 81) mL/min/1.73m². The median listing Cye e-GFR was 58 (interquartile range 133) mL/min/1.73m². On Pearson correlation both Cye and Cr e-GFR had highly significant correlation with death within 3 months from listing. On bivariate logistic regression analysis Cye e-GFR but not Cr e-GFR, was an independent predictor of 3-month waiting list mortality ($p=0.039$ Vs. 0.139).

Conclusions

Renal impairment is more frequently diagnosed at moment of listing for liver transplantation by Cye e-GFR than Cr e-GFR. Although renal impairment is correlated with 3-month mortality in liver transplantation waiting list Cr e-GFR and not Cye e-GFR is the predictor of mortality.



VP1

Title: Total hepatectomy with caval flow preservation by left-to-right approach.

Authors : *Ftérliche Fadhel Samir MD1, Guido Liddo, MD1, Federica Dondéro, MD1, Daniele Sommacale, MD1, Safi Dokmak, MD1 and Alain Sauvanet, MD1, Jacques Belghiti, MD1.*

Hepatopancreatobiliary surgery& Liver Transplantation, Beaujon Hospital, Clichy,France.

Body Caval preservation during liver transplantation (LT) also known as piggy back technique (PB) is utilized by many teams because, compared to the classic technique, shows less hemodynamic effects and allows the implantation of split and living donor grafts. Most of the papers in literature focus on graft implantation and vascular reconstruction procedures. However the technique of total hepatectomy for PB LT and its consequence on hemodynamic variations due to caval torsion has not been exhaustively described. We propose a technique of total hepatectomy for PB LT, which consists in a left-to-right approach (LtAA). This procedure, applied on 204 consecutive cases seems to have some advantages over the standard approach. LtAA avoid caval twisting, reducing the transient hemodynamic instability generated by the rotation of the right liver around the vena cava. Moreover, the relative atrophy of the right liver, with bigger caudate and left lobe that is often present in cirrhotic livers, makes caval dissection easier in left to right way. An additional advantage is that right liver is dissected at the end of hepatectomy. In fact cirrhotic patients have frequently collateral vessels in the right ligament which are a frequent site of bleeding during hepatectomy. The technique described is a safe, simple and feasible and can be considered an attractive option for PB LT.



