مؤسسة حمد الطبية
Hamad Medical Corporation
HEALTH • EDUCATION • RESEARCH صحة • تعليم • بحوث

PALTS

DOHA 2016 Hepatocellular Carcinoma Conference

In conjunction with Pan Arab Liver Transplantation Registry Meeting

4 to 5 March 2016, Doha, Qatar

Endorsed by

ILCA 10 YEARS International Liver Cancer Association

ILTS International Liver Transplantation Society

20 CME/CNE/CPE

PROGRAM & ABSTRACT BOOK

Welcome Message

Dear colleagues,

It gives us great pleasure to welcome you to Qatar and to the Doha 2016 Hepatocellular Carcinoma Conference held alongside the Pan Arab Liver Transplant Registry Meeting. Hamad Medical Corporation (HMC) is always proud to host such events as part of its continuous commitment to promote research and education efforts that help to address health needs of now and the future, both locally and regionally. The event is organized in collaboration with the Pan Arab Liver Transplant Society (PALTS) with endorsement from the International Liver Transplantation Society (ILTS) and the International Liver Cancer Association (ILCA).

Hepatocellular carcinoma is a major health concern worldwide, particularly in our region where it is highly prevalent. This multidisciplinary conference is an outstanding scientific platform for the exchange of experiences in the prevention, diagnosis and treatment of hepatocellular carcinoma. A host of distinguished international and regional speakers will enrich the scientific program through state-of-the-art lectures, round-table discussions and free paper presentations.

We would like to thank HMC in particular for hosting this conference. HMC's dedicated support and continued commitment were instrumental in making this event possible. In addition to this, we would like to recognize contributing societies (PALTS, ILTS and ILCA) and our sponsors for their contribution and support.

Finally, we thank you all for coming and wish you a fruitful conference and an enjoyable stay in Qatar

Yours Sincerely,

Prof. Hatem Khalaf
Chairman

Dr. Kakil Rasul
Co-Chair

Conference Board

Advisory Committee

Dr. Yousuf Al Maslamani (Director of HGH)
Dr. Abdulla Al-Ansari (Chairman of Surgery)
Dr. Saad Al-Kaabi (Head of Gastroenterology)
Prof. Alexander Knuth (Director of NCCCR)

Organizing Committee

Prof. Hatem Khalaf (Chairman)
Dr. Kakil Rasul (Co-chair)
Dr. Ahmed Elaffandi (Secretary General)
Dr. Walid Elmoghazy (Scientific Committee)
Dr. Khaled Ahmed (Member)
Ms. Sheryll Pacer (Event Manager)
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Ms. Cristina Gonzales (Medical Education)
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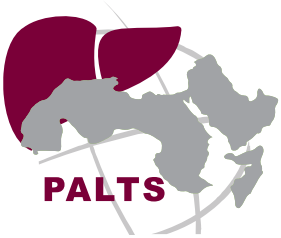

Pan Arab Liver Transplant Society

BOARD OF DIRECTORS

Hatem Khalaf (Qatar)	President
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Ahmed Mukhtar (Egypt)	Councilor-at-Large

www.palts.org **info@palts.org** LinkedIn facebook

Faculty and Invited Guests

Guests of Honor

Prof. Jan Lerut
President, International Liver Transplantation Society (ILTS)

Prof. Mehmet Haberal
President, Middle East Society of Organ Transplantation (MESOT)

International:

Jacques Belghiti (France)
Josep Llovet (Spain/USA)
Laura Dawson (Canada)
Massimo Colombo (Italy)
Mureo Kasahara (Japan)
Pierre-Alan Clavien (Switzerland)
Riad Salem (USA)
Roberto Troisi (Belgium)
Vincenzo Mazzaferro (Italy)

Local (Qatar):

Abraham Marcus
Ahmed Elaffandi
Ahmed Mahfouz
Alexander Knuth
Asmaa Mohamed
Faisal Malmstrom
Hatem Khalaf
Jonas Feilchenfeldt
Kakil Rassul
Manik Sharma
Mohammed Elmasry
Muna Albakri
Muna Al-Maslamani
Noora Al-Hammadi
Primoz Petric
Sarbar Napaki
Shaikh Nissaruddin
Walid Elmoghazy
Yaser Hamad
Yaser Kamel
Yolande Hanssens

Regional:

Abdallah Bashir	(Jordan)
Adel Hosny	(Egypt)
Ahmed Mukhtar	(Egypt)
Alaa Hakim	(UAE)
Alaa Radwan	(Egypt)
Ali Al-Dameh	(UAE)
Amr Abdel-Aal	(Egypt)
Amr Attia	(Egypt)
Amr Helmy	(Egypt)
Anwar Jarrad	(Jordan)
Ashraf Omar	(Egypt)
Ayman Abdo	(KSA)
Bestoon Hassan	(Iraq)
Ehab El Hossainy	(KSA)
Faisal Abaalkhail	(KSA)
Feyyaz Artukoglu	(Turkey)
Ghodratollah Nowrasteh	(UAE)
Hamad Al-Bahili	(KSA)
Hamad Al-Suhaibani	(KSA)
Hani Alsaati	(Bahrain)
Hussain El-Siesy	(KSA)
Ibrahim Marwan	(Egypt)
Ibrahim Moustafa	(Egypt)
Jangi Al-Salihi	(Iraq)
Kadhim Namiq	(Iraq)
Kamel Bentabak	(Algeria)
Khaled Abdullah	(KSA)
Khaled Abou El-Ella	(Egypt)
Mahmoud El-Meteini	(Egypt)
Mohamad Khalifeh	(Lebanon)
Mohamed Al-Qahtani	(KSA)
Mohamed Al-Sebayel	(KSA)
Mohamed Kamal Shaker	(Egypt)
Nooraddin Alla Werdi	(Iraq)
Omar Bekdache	(UAE)
Saeb Hammodi	(Jordan)
Sameer Smadi	(Jordan)
Sameh Abdel-Wahab	(Egypt)
Sami M. Salih	(Iraq)
Tahar Khalfallah	(Tunisia)
Tarek Amin	(KSA)
Tarek Ibrahim	(Egypt)
Tarek Ismail	(Bahrain)
Yasser Khafaga	(KSA)

Certificates of Attendance and CME Points

A total of **20 CME/ 20 CNE/ 20 CPE** credit hours will be credited for attendance of the conference scientific program. A bar code sticker is attached to the name badge which uses RFID (Radio Frequency Identification) technology to track the sessions you have attended, including your check-in and check-out times.

RFID monitors are located at the entrance and exit of the lecture hall to keep an automatic record of your attendance and how long you attended the session. You must wear your name badge at all times.

Delegates must attend a minimum of **70 percent** of each session to qualify for CME/ CNE/CPE credits. Certificates will be available online one week after the conclusion of the conference. You can view and print your certificate at the conference website: www.hamad.qa/EN/All-Events/dhcc_2016

If you have any questions regarding the conference, please go to the Registration Desk for help, or email us at: hcc2016@hamad.qa

Speakers' Corner

Thank you for agreeing to speak at this conference. In order to ensure timely progression of the conference program, it is essential that your presentation be loaded onto the IT system well ahead of your session time. The latest you will be able to submit your presentation is thirty minutes prior to the session in which you are scheduled to speak. Presentations are to be submitted to the conference IT specialist adjacent to the conference hall.

Registration

Thank you for registering to attend the conference. Please note that conference registration entitles you to:

- Admission to the scientific program
- Conference bag and kits
- Conference abstract booklet
- Certificate of attendance with CME/CNE/CPE Points
- Daily coffee breaks, snacks and lunches
- Entrance to the exhibition

Please note that the Gala Dinner is a **ticketed event** and is **NOT** included in your registration. You can purchase tickets at the registration desk, however spaces are limited and will be available on a first-come, first-served basis

Awards for Best Presentations

The Medical Education Department at Hamad Medical Corporation is offering awards for the best oral and poster presentations. A committee will review the abstracts and select the winning presentations. The prizes will be announced during the closing ceremony and will be delivered by a representative from the Medical Education Department at Hamad Medical Corporation.
It is worth emphasizing that the competition will only include abstracts submitted for free oral presentations and poster presentations. All other types of presentations will be excluded (e.g. invited speakers, state-of-the-art lectures, plenary sessions, etc.)

Prize Draws (Raffle)

There will be four raffle draws during the two-day conference for prizes including iPads and iPhones. To enroll, please pick up and complete your ticket at the registration desk and then simply drop it in the bowl adjacent to the lecture hall. Once entered, your conference badge will be stamped by our staff as confirmation. Each delegate is entitled to one raffle ticket. Conference staff are automatically excluded from entering.

Please note that the prize draws will be randomly performed inside the main lecture hall during any given session. Winners must be present in the lecture hall at the time of each draw to claim his/her prize.

Social Program

Please be sure to have your invitation on your person while attending the following events.

Welcome Dinner:
Thursday evening, 3 March at the Sheraton Hotel.

Gala Dinner:
Friday evening, 4 March at Al-Mourjan Restaurant

Please note that the Gala Dinner is a **ticketed event** and is **NOT** included in your registration. You can buy your Gala Dinner tickets at the registration desk, however the number of tickets is limited and will be available on a first-come, first-served basis

Buses will depart from the Sheraton Hotel. The dinner will be held at the stunning Al Mourjan Restaurant which enjoys one of the best locations in town, overlooking the beautiful Doha Bay, just a stone's throw from Qatar's prestigious business hub; West Bay. It is located on the edge of the sea in the middle of Doha's new financial district, yet removed from city noise. Live Oud music will be played throughout the evening.

Return options to the hotel include a scenic walk by Qatar's iconic seaside promenade 'the Corniche', a dhow boat cruise through the rich turquoise water, or a convenient bus ride.

Once again, having invitations on hand is essential.

Faculty Dinner:
Saturday evening, 5 March.
Exact time and location are yet to be determined

Travel Information

Our official travel agent is Regency Travel. An agency helpdesk will be available at all times at the conference hall to assist you with any transport or travel related questions. For more information feel free to visit Regency's website: http://www.regencyholidays.com/

Exhibition details

There will be an exhibition area for partners and sponsors at the foyer area near the lecture hall.

Help and Assistance

Our help desk is available at the conference hall to help you with any questions you may have. The team will do their absolute best to provide you with assistance for all your conference related needs.

The International Liver Cancer Association Announces its 10th Annual Conference

ILCA 2016

9–11 September 2016
Vancouver, Canada

ILCA
International Liver Cancer Association
10 YEARS

Conference Highlights:

State-of-the-Art Lectures

Cutting Edge Symposia

General Sessions

Interactive Luncheon Workshops

e-Poster Viewing Tours

Industry Exhibition

Networking Breaks and Reception

►►►

The international multidisciplinary forum for liver cancer experts around the latest innovations in research and care

Abstract submissions deadline: 16 April 2016

Early registration deadline: 8 July 2016

ilca2016.org

Scientific Program

First Day: Friday 4 March, 2016

07:00 - 09:00 **Registration**

09:00 - 09:30 **Opening Remarks**

Hatem Khalaf (Qatar)
Conference Chairman and PALTS President

Yousef Al-Maslamani (Qatar)
Medical Director, Hamad General Hospital

Abdulla Al-Ansari (Qatar)
Chairman of Surgery, Hamad Medical Corporation

Jan Lerut (Belgium)
President, International Liver Transplantation Society (ILTS)

Mehmet Haberal (Turkey)
President, Middle East Society for Organ Transplantation (MESOT)

09:30 - 11:30 **Pan Arab Liver Transplant Registry Meeting**

Chairpersons: *Mehmet Haberal (Turkey), Jan Lerut (Belgium), Ibrahim Mostafa (Egypt), Riadh Fadhil (Qatar)*

Pan Arab Liver Transplantation Society *(5 Minutes)*
Hatem Khalaf (Qatar)

Pan Arab Liver Transplantation Registry *(20 Minutes)*
Mohammed Al-Sebayel (KSA)

Liver Transplant Activity in Egypt *(15 Minutes)*
Ibrahim Marwan (Egypt)

Liver Transplant Activity in Saudi Arabia *(15 Minutes)*
Mohammed Al-Qahatani (KSA)

Liver Transplant Activity in Jordan *(10 Minutes)*
Saeb Hammoudi (Jordan)

Liver Transplant Activity in Lebanon *(10 Minutes)*
Mohamad Khalifeh (Lebanon)

Liver Transplant Activity in Qatar *(10 Minutes)*
Ahmed Elaffandi (Qatar)

PALTS Awarding Ceremony

11:30 - 12:30 **Coffee Break - Friday Prayer at Conference Venue - Poster viewing**

12:30 - 13:00 **State-of-the-art Lecture**

Chairpersons: *Adel Hosny (Egypt), Abdullah Bashir (Jordan)*

Surgical Management Strategies for Hepatocellular Carcinoma: Past, Present, and Future
Vincenzo Mazzaferro (Italy)

13:00 - 14:30 **Plenary I:** *(15 minutes each)*

Chairpersons: *Kakil Rasul (Qatar), Abraham Marcus (Qatar), Amr Helmy (Egypt)*

Management Guidelines for Hepatocellular Carcinoma in Saudi Arabia
Ayman Abdo (KSA)

Epidemiology of Hepatocellular Carcinoma in Egypt
Mohamed Shaker (Egypt)

Liver Transplant for Hepatocellular Carcinoma at Jordan Hospital
Anwar Jarrad (Jordan)

Anesthetic Challenges in Hepatic Resections
Yasser Hamad (Qatar)

Infections after Major Liver Surgery
Muna Almaslamani (Qatar)

14:30 - 15:30 **Lunch Break**

15:30 - 16:00 **State-of-the-art Lecture**

Chairpersons: *Mohd. Al-Sebayel (KSA), Khaled Abou Elella (Egypt)*

Hepatocellular Cancer and Liver Transplantation: The End Of The Milan Story?
Jan Lerut (Belgium)

16:00 - 17:30 **Plenary II:** *(30 minutes each)*

Chairpersons: *Fatma Al-Medaihki (Qatar), Khaled Abdullah (KSA), Khaled Amer (Egypt)*

Liver Transplantation for Hepatic Malignancy in Children
Mureo Kasahara (Japan)

Can We Safely Resect HCC on Cirrhosis with The Laparoscopic Approach?
Roberto Troisi (Belgium)

Liver Transplantation for Hepatocellular Cancer
Mehmet Haberal (Turkey)

Break

19:00 **Gala Dinner**

- **TICKETED EVENT**
- **NOT INCLUDED IN REGISTRATION**
- **TICKET HOLDER ONLY**

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Second Day: Saturday 5 March, 2016

08:00 - 09:30 **Free Paper Presentations** *(10 min each)*

Chairpersons: *Saeb Hammoudi (Jordan), Hamad Al-Bahili (KSA), Amr Abdelaal (Egypt), Walid El-Moghazy (Qatar)*

Prognosis And Results After Resection Of Very Large (>10 Cm) Hepatocellular Carcinoma.
Sameer Smadi (Jordan)

Role Of Laparoscopy In Changing The Management Of Hepatocellular Carcinoma
Mohamed Seleem (Egypt)

Pattern Of Hepatocellular Carcinoma Recurrence Following Living Donor Liver Transplantation
Tarek Ibrahim (Egypt)

Low Utility Of FDG-PET CT In Patients With Hepatocellular Carcinoma Before Liver Transplantation
Hussien Elsiesy (KSA)

Therapeutic Response Assessment And Outcome Of Radiofrequency Ablation For Hepatocellular Carcinoma: Correlation With Histopathological Pattern
Asmaa Gomaa (Egypt)

Y-90 Radioembolization Of Hepatocellular Carcinoma With Portal Vein Tumor Thrombus
Mohamed Abdelmaksoud (Egypt)

Laparoscopic Lt. Lateral Bisegmentectomy For HCC: Moving From Peripheral To Anatomical, NLI Experience (Video Presenation)
Hossam Soliman (Egypt)

09:30 - 10:00 **State-of-the-art Lecture**

Chairpersons: *Jonas Feilchenfeldt (Qatar), Sarbar Napaki (Qatar)*

Molecular targeted therapies in advanced Hepatocellular Carcinoma
Josep Llovet (Spain/USA)

10:00 - 10:30 **Coffee Break**

10:30 - 11:30 **Plenary III:** *(30 minutes each) Joint session with ILCA*

Chairpersons: *Noora Al-Hammadi (Qatar), Hamad Al-Suhaibani (KSA)*
Yasser Khafaga (KSA)

Trans-Arterial Therapies for Hepatocellular Carcinoma
Riad Salem (USA)

Role of External Beam Radiation Therapy in Management of Hepatocellular Carcinoma
Laura Dawson (Canada)

11:30 - 12:00 **State-of-the-art Lecture**

Chairpersons: *Hussain Elsiesy (KSA), Yasser Kamel (Qatar)*

Impact of New Antiviral Therapies on Management Strategies for Hepatocellular
Massimo Colombo (Italy)

12:00 - 12:30 **Coffee Break**

12:30 - 14:00 **Plenary IV:** *(20 minutes each)*

Chairpersons: *Alexander Knuth (Qatar), Ibrahim Al-Hijji (Qatar),*
Faisal Abaalkail (KSA)

Diagnostic challenges of Hepatocellular Carcinoma and Mimicking Lesions
Ahmed Mahfouz (Qatar)

Combined Interventional Radiological Management of Unresectable HCC
Sameh Abdel Wahab (Egypt)

Combining Sorafenib with Other Treatment Modalities in Hepatocellular Carcinoma
Jonas Feilchenfeldt (Qatar):

Is There a Place for Immunotherapy in Hepatocellular Carcinoma?
Kakil Rasul (Qatar)

14:00 - 14:30 **State-of-the-art Lecture**

Chairpersons: *Mahmoud El-Meteini (Egypt), Faisal Malmstrom (Qatar)*

Liver Resection for Hepatocellular Carcinoma in Cirrhosis
Jacques Belghiti (France)

14:30 - 15:30 **Lunch Break**

15:30 - 17:00 **Plenary V:** *(20 minutes each)*

Chairpersons: *Mohamad Abunada (Qatar), Mohd. Al-Saghier (KSA)*
Reyadh Mohsen (Qatar)

Living Donor Liver Transplantation for HCC Beyond All Criteria: Outcome Analysis
Mahmoud El-Meteini (Egypt)

The Role of Cytoreductive Surgery and HIPEC in advanced Hepatocellular Carcinoma
Tarek Amin (KSA)

Ruptured Hepatocellular Carcinoma: Why, When, and How to Manage?
Ahmed Zarour (Qatar)

Palliative Care For Patients With Hepatocellular Carcinoma
Ayman Allam (Qatar)

17:00 - 17:30 **Coffee Break**

17:30 - 18:00 **State-of-the-art Lecture**

Chairpersons: *Jacques Belghiti (France), Ahmed Elaffandi (Qatar)*

Transplantation vs. Resection for Hepatocellular Carcinoma
Pierre A. Clavien (Switzerland)

18:00 **Awarding Ceremony and Closing Remarks**

BAYER

LIVER

Nexavar®
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Nexavar® is the first and only *targeted systemic treatment to demonstrate an overall survival (OS) benefit vs placebo in hepatocellular carcinoma (HCC) patient's not eligible for Locoregional therapies* [1,2]

Abbreviated Package Leaflet: Product Name: Nexavar 200 mg film-coated tablets. Composition: The active substance is sorafenib. Each film-coated tablet contains 200 mg sorafenib (as tosylate). The other ingredients are: Tablet core: croscarmellose sodium, microcrystalline cellulose, hypromellose, sodium laurilsulfate, magnesium stearate. Tablet coating: hypromellose, macrogol, titanium dioxide (E 171), ferric oxide red (E 172). Indications: Nexavar is used to treat liver cancer (hepatocellular carcinoma). Nexavar is also used to treat kidney cancer (advanced renal cell carcinoma) at an advanced stage when standard therapy has not helped to stop your disease or is considered unsuitable. Nexavar is used to treat thyroid cancer (differentiated thyroid carcinoma). Nexavar is a so-called multikinase inhibitor. It works by slowing down the rate of growth of cancer cells and cutting off the blood supply that keeps cancer cells growing. Contraindications: If the patient is allergic to sorafenib or any of the other ingredients of this medicine. Warnings and precautions: The patient should talk to the doctor or pharmacist before taking Nexavar. The patient should take special care with Nexavar. If the patient experience skin problems. Nexavar can cause rashes and skin reactions, especially on the hands and feet. These can usually be treated by the doctor. If not, the doctor may interrupt treatment or stop it altogether. If the patient has high blood pressure. Nexavar can raise blood pressure, and the doctor will usually monitor the blood pressure and may giv a medicine to treat the high blood pressure. If the patient got any bleeding problems, or are taking warfarin or phenprocoumon. Treatment with Nexavar may lead to a higher risk of bleeding. If the patient is taking warfarin or phenprocoumon, medicines which thin the blood to prevent blood clots, there may be a greater risk of bleeding. If the patient got chest pain or heart problems. The doctor may decide to interrupt treatment or stop it altogether. If the patient has a heart disorder, such as an abnormal electrical signal called «prolongation of the QT interval». If the patient is going to have surgery, or if the patient had an operation recently. Nexavar might affect the way the wounds heal. The patient will usually be taken off Nexavar if the patient is having an operation. The doctor will decide when to start with Nexavar again. If the patient is taking irinotecan or are given docetaxel, which are also medicines for cancer. Nexavar may increase the effects and, in particular, the side effects of these medicines. If the patient is taking Neomycin or other antibiotics. The effect of Nexavar may be decreased. If the patient has severe liver impairment. The patient may experience more severe side effects when taking this medicine. If the patient have poor kidney function. The doctor will monitor the fluid and electrolyte balance. Fertility. Nexavar may reduce fertility in both men and women. If the patient is concerned, the patient should talk to a doctor. Holes in the gut wall (gastrointestinal perforation) may occur during treatment. In this case the doctor will interrupt the treatment. If the patient has thyroid cancer. The doctor will monitor blood calcium and thyroid hormone levels. The patient should tell the doctor if any of these affect the patient. The patient may need treatment for them, or the doctor may decide to change the dose of Nexavar, or stop treatment altogether. Children and adolescents: Children and adolescents have not yet been tested with Nexavar. Interactions: Some medicines may affect Nexavar, or be affected by it. The patient should tell the doctor or pharmacist if the patient is taking, have recently taken or might take anything in this list or any other medicines, including medicines obtained without a prescription: Rifampicin, Neomycin or other medicines used to treat infections (antibiotics). St John's wort, a herbal treatment for depression. Phenytoin, carbamazepine or phenobarbital, treatments for epilepsy and other conditions. Dexamethasone, a corticosteroid used for various conditions. Warfarin or phenprocoumon, anticoagulants used to prevent blood clots. Doxorubicin, capecitabine, docetaxel, paclitaxel and irinotecan, which are cancer treatments. Digoxin, a treatment for mild to moderate heart failure. Pregnancy and breast-feeding: The patient should avoid becoming pregnant while being treated with Nexavar. If the patient could become pregnant the patient should use adequate contraception during treatment. If the patient become pregnant while being treated with Nexavar, immediately the patient should tell the doctor who will decide if the treatment should be continued. The patient must not breast-feed the baby during Nexavar treatment, as this medicine may interfere with the growth and development of your baby. Driving and using machines: There is no evidence that Nexavar will affect the ability to drive or to operate machines. Administration: The recommended dose of Nexavar in adults is 2 x 200 mg tablets, twice daily. This is equivalent to a daily dose of 800 mg or four tablets a day. The patient should swallow Nexavar tablets with a glass of water, either without food or with a low-fat or moderate fat meal. The patient should not take this medicine with high fat meals, as this may make Nexavar less effective. If the patient intend to have a high fat meal, the patient should take the tablets at least 1 hour before or 2 hours after the meal. The patient should always take this medicine exactly as the doctor has told the patient. The patient should check with the doctor or pharmacist if he is not sure. It is important to take this medicine at about the same times each day, so that there is a steady amount in the bloodstream. The patient should usually carry on taking this medicine as long as the patient is getting clinical benefits, and not suffering unacceptable side effects. If the patiemt take more Nexavar than he should. The patient should tell the doctor straight away if the patient (or anyone else) have taken more than the prescribed dose. Taking too much Nexavar makes side effects more likely or more severe, especially diarrhoea and skin reactions. The doctor may tell the patient to stop taking this medicine. If the patient forget to take Nexavar. If the patient have missed a dose, the patient should take it as soon as the patient remember. If it is nearly time for the next dose, forget about the missed one and carry on as normal. The patient should not take a double dose to make up for forgotten individual doses. Side effects: Like all medicines, this medicine can cause side effects although not everybody gets them. This medicine may also affect the results of some blood tests. Diarrhea, feeling sick (nausea), feeling weak or tired (fatigue), pain (including mouth pain, abdominal pain, headache, bone pain, tumour pain). hair loss (alopecia), flushed or painful palms or soles (hand foot skin reaction). itching or rash, throwing up (vomiting), bleeding (including bleeding in the brain, gut wall and respiratory tract; haemorrhage). high blood pressure, or increases in blood pressure (hypertension). Infections. loss of appetite (anorexia). Constipation. joint pain (arthralgia). Fever. weight loss. dry skin. flu-like illness. indigestion (dyspepsia). difficulty swallowing (dysphagia). inflamed or dry mouth, tongue pain (stomatitis and mucosal inflammation). low calcium levels in the blood (hypocalcaemia). low potassium levels in the blood (hypokalaemia). muscle pain (myalgia). disturbed sensations in fingers and toes, including tingling or numbness (peripheral sensory neuropathy). Depression. erection problems (impotence). altered voice (dysphonia). Acne, inflamed, dry or scaly skin that sheds (dermatitis, skin desquamation). heart failure. heart attack (myocardial infarction) or chest pain. tinnitus (ringing sound in the ear). kidney failure. abnormally high levels of protein in the urine (proteinuria). general weakness or loss of strength (asthenia). decrease in the number of white blood cells (leucopenia and neutropenia). decrease in the number of red blood cells (anaemia). low number of platelets in the blood (thrombocytopenia). inflammation of hair follicles (folliculitis). underactive thyroid gland (hypothyroidism). low sodium levels in the blood (hyponatraemia). distortion of the sense of taste (dysgeusia). red in the face and often other areas of the skin (flushing). runny nose (rhinorrhoea). heartburn (gastro oesophageal reflux disease). skin cancer (keratoacanthomas/squamous cell cancer of the skin). a thickening of the outer layer of the skin (hyperkeratosis). a sudden, involuntary contraction of a muscle (muscle spasms). inflamed stomach lining (gastritis). pain in the tummy (abdomen) caused by pancreatitis, inflammation of the gall bladder and/or bile ducts. yellow skin or eyes (jaundice) caused by high levels of bile pigments (hyperbilirubinaemia). allergic like reactions (including skin reactions and hives). Dehydration. enlarged breasts (gynaecomastia). breathing difficulty (lung disease). Eczema. overactive thyroid (hyperthyroidism). multiple skin eruptions (erythema multiforme). abnormally high blood pressure. holes in the gut wall (gastrointestinal perforation). reversible swelling in the rear part of the brain that can be associated with headache, altered consciousness, fits and visual symptoms including visual loss (reversible posterior leukoencephalopathy). a sudden, severe allergic reaction (anaphylactic reaction). allergic reaction with swelling of the skin (e. g. face, tongue) that may cause difficulty in breathing or swallowing (angioedema). abnormal heart rhythm (QT prolongation). inflammation of the liver, which may lead to nausea, vomiting, abdominal pain, and jaundice (drug induced hepatitis). a sunburn-like rash that may occur on skin that has previously been exposed to radiotherapy and can be severe (radiation recall dermatitis). serious reactions of the skin and/or mucous membranes which may include painful blisters and fever, including extensive detachment of the skin (Stevens-Johnson syndrome and toxic epidermal necrolysis). abnormal muscle breakdown which can lead to kidney problems (rhabdomyolysis). damage of the kidney causing them to leak large amounts of protein (nephrotic syndrome). inflammation of the vessels in the skin which may result in rash (leucocytoclastic vasculitis). Reporting of side effects: If the patient get any side effects, the patient should talk to the doctor or pharmacist. This includes any possible side effects not listed in this leaflet. To report any side effect(s): National Pharmacovigilance and Drug Safety Center (NPC). Fax: + 966 - 11 - 205 - 7662. Call NPC at +966 - 11 - 2038222, Ext.: 2317 - 2356 - 2353 - 2354 - 2334 - 2340. Toll - free: 8002490000. E - mail: npc.drug@sfda.gov.sa. Website: www.sfda.gov.sa/npc. For other countries, please refer to the health authorities in your country. **Date of the information: May, 2014**

References: *1-Llovet J, Ricci S, Mazzaferro V, et al.Sorafenib in advanced hepatocellular carcinoma. N Engl J Med. 2008;359(4):378-387.*
2-European Association for the Study of the Liver, European Organisation for Research and Treatment of Cancer. EASL–EORTC Clinical Practice Guidelines: management of hepatocellular carcinoma.J Hepatol.2012;56(4):908-943

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Oral Presentations

OP- 1
HCC Resection vs Transplantation

Pierre A. Clavien
University Hospital Zurich, Switzerland

Abstract:
Curative liver resection remains the standard of care for HCC in non-cirrhotic patients. In cirrhotic patients with well-preserved liver function and absence of portal hypertension, liver resection is also an option to treat HCC, but liver transplantation provides the best oncologic treatment, and the only approach in selective cases.
The Milan criteria provide the benchmark requirements for liver transplantation (LT) (a single tumor <5 cm or up to 3 tumors <3 cm) with 5 year survival rates above 70%. Extended criteria besides Milan include factors such as risk of tumor progression or recurrence, based on microvascular invasion, levels of tumor differentiation or other markers. Many groups have proposed a number of extended criteria, but few have been validated and widely used.
In compensated cirrhotics with early hepatocellular carcinoma, upfront liver resection and salvage liver transplantation in case of recurrence may have outcomes comparable to primary LT, and is therefore an option in face of global organ shortage. Living donor LT is a viable option for HCC with excellent long term results. Another approach, is to resect and based on the histology rapidly proceed to LT. This approach is known as bridging LT with resection.

OP-2
Outcomes of 2739 LDLT Without A Diceased Donor Back up: Insight And Lessons To Be Learned

Marwan I, Elmeteni M, Hosny A, Aamer K, Amin M, Abd El-wahab M.
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Abstract:
Introduction: Living donor liver transplantation (LDLT) is established therapy for end stage liver diseases when deceased donor (DD) is not a viable alternative.. We present the outcomes, and discuss lessons learned from our experience in Egypt.

Methods: Between August 2001 to August 2015, 2739 LDLT cases were performed, adults represented 94.23% with mean age 55.7 years while 5.77% were pediatric with mean age 6.7 years. Main indication in adults was HCV cirrhosis 93% with or without hepatocellular carcinoma [HCC] with mean MELD score 18. HCC cases were 28.5% and 86% of them were within Milan criteria. In pediatrics, biliary atresia was 55%. A single case with hepatoblastoma.

Results: Operative mortality was 1%, donor mortality was five (0.18%). Major morbidity of hepatic insufficiency requiring LDLT two weeks post donation. Adult mortality was 32% versus 22.7% for the pediatrics. Biliary complications amounted 25%. Recipients with HCC, 1st year recurrence was 11%, 3 years recurrence was 17%. five year survival was 58% and mortality due to tumor recurrence was 14%. Hepatoblastoma case is doing well recurrence-free for 10 years. Lessons learned from our experience are: liver biopsy for donors and remaining liver volume not less than 35%.

Conclusion: LDLT is a potentially safe procedure when DD is not available. The long term and disease free survival in HCC cases received LDLT is comparable with those using diceased donors. Although LDLT had reasonable outcomes; yet, it carries considerable risks to healthy donors, lacks cadaveric back up and is not feasible for all patients.

OP-3
Liver transplant for Hepatocellular carcinoma at Jordan Hospital

Anwar Jarrad, Saeb Hammoudi, Muawyeh Ababneh, Aiman Obed, and Abdulla Albashir
Jordan Hospital, Amman, Jordan

Abstract:
Background: Liver Transplant is a well known treatment of HCC with or without end stage liver disease. The standard selection of patients is within and extended Milan criteria. We report here the Jordan Hospital experience of LDLTx for HCC

Patient and Methods: We have transplanted so far 16 cases of HCC since the program started in 9/2004. Male: female is 13/3, Age: 35-61 years old. Diagnosis of liver disease included: HBV, HCV, AIH and Cryptogenic liver disease.

Results: of the patients survived more than 3 months post LTX, 12 patients are available for the study, survival was not different between the group with HCC and without HCC, and also the complications. Three patients so far had recurrence. One he died after 15 months and he had multifocal HCC "Diffuse variety" with vascular invasion and the second died after 11 months due to gross intra hepatic vascular invasion which was not apparent on radiological investigations and the third died after 5 years and 8 months post LTX which was incidental HCC at the time of liver transplant.

Discussion: liver transplant is a viable option for patients with HCC and chronic liver disease. There was no significant difference in survival regarding Milan or extended Milan criteria without vascular invasion
Also the recurrence rate was low without vascular invasion
The etiology of liver disease did not make a difference also
Invasion of the blood vessels appeared to be the most important factor for recurrence.
The use of anti tumor Imunosuppresion or Sorafenib in this small group is not sufficient to make reasonable conclusions.

Conclusion: Liver transplant is a major treatment modality in certain patient with HCC even with living donor LTX, even with extended criteria for HCC selection. A part from vascular invasion the outcome in our population (HCC) was comparable to transplanted patients without HCC

OP-4
Liver Transplantation for Hepatocellular Carcinoma

Mehmet Haberal, Aydincan Akdur, Gokhan Moray, Gulnaz Arslan, Figen Ozcay, Haldun Selcuk, Handan Ozdemir - Baskent University, Ankara, Turkey

Abstract:
Introduction: Hepatocellular carcinoma (HCC) is the sixth most common cancer worldwide and the third highest cause of death related to malignancy. Since HCC diagnosis is typically late, the median survival following diagnosis is approximately 6-20 months. The 5-year survival rate is reported as less than 12%. HCC typically arises in the background of cirrhosis. Liver transplantation is regarded as an optimal radical therapy for selected patients with HCC. Initial experiences with orthotopic liver transplantation were limited to patients with extensive unresectable tumors, and were marked by uniformly dismal outcomes due to high rates of tumor recurrence. Milan criteria are the gold standard for recipient selection. Since Milan criteria are restrictive for increasing candidates, they are expanded into alternative sets of criteria. We aimed to evaluate our LT indications and results for HCC.

Materials and Methods: Between 8 December 1988 and 31 December 2015 we performed 512 liver transplants at our centers. We developed our criteria for LT in HCC candidates at Baskent University and currently perform LT in all HCC patients without major vascular invasion and distant metastasis. We retrospectively reviewed our LT results of patients with HCC.

Results: 59 patients (59/512; 11.5%) had liver transplantation for HCC. 51 were male (86%) and 8 were female (14%). 11 of these patients were children and 48 were adults. We performed 39 living donor LT (10 pediatric, 29 adult), 20 deceased donor LT (1 pediatric, 19 adult). We had 16 patients (27%; 1 pediatric and 15 adults) who were beyond Milan criteria radiologically and pathologically. We performed 11 living donor LT and 5 deceased donor LT in these patients. All deceased donor LT had down staging therapy before LT. We had 15 patients (25.4%; 4 pediatric and 11 adults) who were within Milan criteria radiologically; but after LT, when pathologic specimens were evaluated, they were found to be beyond Milan. We performed 10 living donor LT and 5 deceased donor LT in these patients. We diagnosed HCC incidentally with pathological examination in 6 patients (10.1%) (4 pediatric, 2 adult). All of the 6 incidental HCC cases were still alive without HCC recurrence for 63-128 month s. HCC recurrence was detected in 14 cases (23.7%). Disease free 5-year survival rates of LT patients beyond Milan criteria and within Milan criteria were 56.8% and 78.7%, respectively (p= .024).

Conclusions: LT within Milan criteria had better survival rates. However, Milan criteria can be safely and effectively expanded with promising results even in patients beyond Milan criteria.

OP-5
Combined interventional radiological management of unresectable HCC

Sameh Abdel Wahab
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Abstract:
Hepatocellular carcinoma (HCC) is the fifth most frequent cancer in the world and the third common cause of cancer related mortality in the world

Hepatocellular carcinoma is also one of the most difficult types of cancer to treat. Surgical resection can change the natural course of HCC at early stages. Unfortunately, because of tumor multifocality, portal venous tumor invasion, and underlying advanced liver cirrhosis, surgical resection can be performed in only 20 % of patients.

Several minimally invasive techniques have been used for the local ablation of liver lesions including laser, microwave, radiofrequency and ethanol ablation. Trans catheter arterial chemoembolization (TACE) is a widely used treatment for the patients with large volume HCC .

As a result of the technical development of locoregional approaches for HCC during the recent decades, the range of combined two or more techniques from the radiological interventional therapies has been continuously extended. Most combined multimodal interventional therapies reveal their enormous advantages as compared with any single therapeutic regimen alone, and play more important role in treating unresectable HCC

Although combined techniques show better outcome regarding the survival rate and efficacy; but there is still limitation due to insufficient studies and insufficient standardized protocols.

OP-6
Is there a place for immunotherapy in HCC?

Kakil Ibrahim Rasul
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Abstract:
For most patients with advanced hepatocellular carcinoma (HCC), surgery with curative intent or a locally ablative technique, such as percutaneous ethanol injection or radiofrequency ablation, are no longer available. Patients can now be treated using transarterial chemoembolization (TACE) or systemic chemotherapy. Several chemotherapeutic drugs have been developed and tested.

The anti-tumor effect of these treatments is limited and adverse reactions are not tolerated in advanced HCC patients with liver cirrhosis, which affects drug metabolism and toxicity. Sorafenib, a multi-targeted tyrosine kinase inhibitor, is the only drug that has been shown to significantly prolong survival (by nearly 3 months) in patients with advanced HCC. However, the incidence of adverse drug reactions is high, particularly in elderly patients, and no second-line treatment has been established for patients who have failed sorafenib treatment.

Novel approaches are urgently needed for t he treatment of this prevalent malignancy. Evidence demonstrating the antigenicity of tumour cells, the discovery that immune checkpoint molecules have an essential role in immune evasion of tumour cells, and the impressive clinical results achieved by blocking these inhibitory receptors, are revolutionizing cancer immunotherapy. HCC potentially immunogenic and typically characterized by inflammation. PD-1 and PD-L1 overexpression associated with poor HCC prognosis.

We present an early clinical trial of anti–PD-1 antibody showed encouraging activity in HCC. Chronic HBV and HCV infections associated with PD-1 upregulation and immune exhaustion. Nivolumab: fully human IgG4 antibody selectively inhibiting interaction between PD-1 and its ligands . PD-1 inhibition with nivolumab may booster host immunity against HCC and improve outcome. Current ongoing phase I/II CA209 (CheckMate)-040 study evaluating safety and efficacy of nivolumab in pts with advanced HCC where sorafen ib not a therapeutic option.

OP-7
The Role of Palliative Care in the Management of advanced HCC

Ayman Allam, Azza Adel Hassan, Yasser Kamel, Jonas Feilchenfeldt, Asma Mohammed Al Bulushi, Zeinab Mohamed Idris
National Center for Cancer Care & Research, Hamad Medical Corporation, Doha, Qatar

Abstract:
Introduction: Advanced HCC at initial presentation is as high as 15%. Patients with advanced HCC are usually not candidate for surgery, palliative chemotherapy or any aggressive interventions. They are also not candidates for participation in clinical trials. The role of Supportive and Palliative care in the management of such group of patients is of utmost importance to improve their quality of life by addressing the challenging symptoms that are encountered in such patients.

Methods: The presentation will address the most common symptoms that need to be managed in a population of patients with advanced HCC such as: pain, fatigue, nausea and vomiting, anorexia-cachexia, malnutrition, hepatic encephalopathy and constipation. The challenge in appropriate medicines that can be prescribed in case of hepatic or renal impairment will be also addressed. The study will include a descriptive analysis of our experience at NCCCR for a total of 40 patients with advanced HCC who have been accepted under Palliative care in the last 4 years.

Results: Analysis of demographic data, prevalence, most common symptoms and treatments received for this group of patients will be presented.

Conclusion: Advanced HCC is not uncommon representing 15% of all HCC cases at initial presentation. Our data show an incidence of 10% among all accepted palliative care patients in the last 4 years. The role of supportive and palliative care in such patients is highly warranted aiming to improve their quality of life through addressing the symptoms most commonly encountered. Psychosocial distress in such patients is among the highest in cancer patients, and should be included in the initial assessment of patients with advanced HCC. The associated hepatic and renal impairment constitute a challenge when selecting opioids, antipsychotics, and other supportive medications.

OP-8
Prognosis and Results after Resection of Very Large (>10 Cm) Hepatocellular Carcinoma.

S. Smadi, T. mnaizel, R. Jarrah, A. Abadi, H. Shnikat, L. Shobaki, S. Al-Qusous, A. Edwan, M. Ghatashah S. Egzzawie, K. Ajarmeh, A.Faori, A. Obeidat, H. Gharaybeh, G. Dhayat, A. Ziadin, H. Haboub
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Abstract:
Introduction:Few potentially curative treatment options exist besides resection for patients with very large (>or=10 cm) hepatocellular carcinoma (HCC). We sought to examine the outcomes and risk factors for recurrence after resection of >or=10 cm HCC

Methods:Perioperative and long-term outcomes were examined for 102 consecutive patients at king hussien medical center, during the period 2004 to 2016 who underwent potentially curative resection of HCC >or=10 cm (n = 24; 23%) vs. those with HCC <10 cm (n = 78; 76%).Transhepatic ipsilateral right PVE + IV with particles and coils was performed in 10 patients with the future liver remnant (FLR; segments II/III with or without I) was less than 25% of the total estimated liver volume (TELV). Disease-free survival (DFS) and overall survival (OS) were determined by Kaplan-Meier analysis and patient, tumor, and treatment characteristics were compared using univariate and multivariate analysis.

Results:Median follow-up was 46 months. Tumors >or=10 cm were more likely to be symptomatic and have vascular invasion ($p < 0.05$). Twelve patients (50%) underwent an extended resection of more than four hepatic segments or resection part of adjacent organs for oncologic clearance (diaphragm-4, inferior vena cava (IVC)-8. Postoperative complications were more common after resection of >10 cm HCC (12/24, 50% vs. 15/78, 19%; $p = 0.04$). Median DFS was significantly shorter in patients with large HCC (>or=10 cm) group compared to patients with smaller HCC (7 vs. 27 months; $p = 0.001$), but overall survival was not different between the two groups (5-year survival 45% vs. 42%; $p = 0.43$). Pathological positive margins and vascular invasion were significant determinants of DFS in tumors >or=10 cm ($p < 0.05$), but only vascular invasion was an independent risk factor for recurrence

Conclusion: Surgical resection is the optimal therapy for very large (>or=10 cm) HCC. Transhepatic ipsilateral right PVE + IV with use of particles and coils is a safe, effective method for inducing contralateral hypertrophy before extended right hepatectomy. Although recurrences are common after resection of these tumors, overall survival was not significantly different from patients after resection of smaller HCC in this series.

OP-9

Role of Laparoscopy in Changing the Management of Hepatocellular Carcinoma

Mohamed Ismail Seleem, Mohamed Hassany, Hossam E El Shafey and Mohamed S Abdelwahed
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Abstract:
Background: Laparoscopic approach offers the advantages of intra-operative laparoscopic ultrasonography (IOLUS), which provides better resolution of the number and location of liver tumors, and liver condition. In recent years the progress of laparoscopic procedures and the development of new and dedicated technologies have made laparoscopic hepatic surgery feasible and safe. The aim of this study is to present the results of our experience in laparoscopic management of Hepatocellular carcinoma (HCC) in cirrhotic patients.

Patients and methods: Between September 2010 and January 2013, Four hundred patients with HCC in liver cirrhosis were referred from HCC clinic at National Hepatology and Tropical Medicine Research Institute (NHTMRI). 65Patients were submitted to diagnostic laparoscopy. 33 patients had Laparoscopic Radiofrequency Ablation with IOLUS guidance and 14 patients had laparoscopic non-anatomical resection while 18 patients had been converted to open laparotomy. Operation time, hospital stay, post-procedure complications were recorded. Spiral CT scan one month postoperative was mandatory during follow up.

Results: Laparoscopic management was completed in 47 patients. The IOLUS examination identified new HCC in three patients. A total of 50 lesions were treated laparoscopically. The mean operative time was 120 ± 50 minutes; eight procedures were associated in six patients: cholecystectomy (6) and adhesiolysis (2). A complete tumor ablation was observed in treated patients by LRFA which were documented via spiral computed tomography (CT scan) one month after treatment. In resection group, histopathology was confirmed that, all tumor resection were with safety margin.

Conclusion: Laparoscopic procedure proved to have a role in changing the management of HCC either by resection or by LRFA. Laparoscopy proved to be a safe and effective technique.

OP-10
Pattern of Hepatocellular Carcinoma Recurrence Following Living Donor Liver Transplantation

Hazem Mohamed Zakaria, Hany Abdel meguid Shoreem, Amr Ahmed Aziz, Khaled Ali Abou El-Ella, Tarek Mohamed Ibrahim
National Liver Institute, Menoufia University, Menoufia, Egypt

Abstract:
Background: Living donor liver transplantation (LDLT) is a promising treatment option for patients with hepatocellular carcinoma (HCC), but tumor recurrence can affect long term survival.

Objective: is to identify the pattern of HCC recurrence after LDLT for early detection and management.

Methods: From April 2003 to October 2014, the record of 60 patients underwent LDLT for HCC at National Liver Institute (NLI), Menoufia University, Egypt, were retrospectively reviewed. The clinico-pathological data were analyzed to determine factors associated with HCC recurrence and outcome.

Results: Seven (11.7%) patients had HCC recurrence after LDLT. Pre-transplant Alfa-fetoprotein (AFP) > 1000 ng/mL, tumor grade, and microvascular invasion were the incriminated risk factors for recurrence. Three (42.8%) patients had intrahepatic and extrahepatic recurrence (lung and bone), 2 (28.6%) patients had only extrahepatic recurrence in bones, and 2 (28.6%) patient had only intrahepatic recur rence. Management was as follow; 2 (28.6%) patients had surgical excision of intrahepatic recurrence and extrahepatic metastasis, 2 (28.6%) patients underwent radiotherapy for bone metastasis, 1 (14.2%) patient underwent intra-operative radiofrequency ablation for liver recurrence, and 2 (28.6%) patients received Sorafenib as medical treatment. The mean time of recurrence was 19.7 months, and mean survival was 29 months

Conclusion: The majority of HCC recurrences after LDLT occur extrahepatic, mainly in first 2 years, which needs strict follow up during this period. A high level of pretransplant serum AFP, and microvascular invasion are risk factor for tumor recurrence, and should be taken into account in selecting candidates for LDLT

OP-11
Low Utility of FDG-PET CT in Patients with Hepatocellular Carcinoma before Liver Transplantation

Faisal Alotaibi, Monther Kabbani, Faisal Abaalkhail, Alicia Chorley, Hany Elbeshbeshy, Waleed Al-Hamoudi, Saleh Alabbad, Markus U Boehnert, Mohammad Alsofayan, Wael Al-Kattan, Baderaldeen Ahmed, Dieter Broering, Mohamed Al Sebayel, Hussien Elsiesy
King Faisal Specialist hospital & Research Center, Riyadh, Saudi Arabia

Abstract:
Background and Aims: Our program utilizes FDG-PET CT routinely as part of liver transplant (LT) evaluation of patients with hepatocellular carcinoma (HCC). The aim of this study is to evaluate the role of FDG-PET CT in the pre-transplant workup.

Method: This is a retrospective chart review of our liver transplant (LT) database of all patients with HCC who underwent FDG-PET CT scan prior to liver transplantation. From January 2011 to December 2014, 275 LTs were performed, including 183 LDLTs and 92 DDLTs. Fifty-three patients had HCC, of whom FDG-PET CT was performed on 41 patients. The data collected included the following: age, gender, etiology of liver disease, tumor size and number on CT or MRI, PET CT results, explant tissue analysis, type of transplant [living donor (LDLT) versus deceased donor (DDLT)] and transplant outcome. Patients within the Milan criteria received a MELD exception of 22 on the cadaveric waiting list, patients within the UCSF criteria were allowed to undergo LDLT, and patients beyond the UCSF criteria received liver transplantation if they were successfully downstaged using loco-regional therapy.

Results: During the study period, 275 LTs were performed, including 183 LDLTs and 92 DDLTs. Fifty-three patients had HCC, of whom FDG-PET CT was performed in 41 patients. The average age was 58 (22-72), and 28 patients were males. The etiology of liver disease was hepatitis C (24 patients), cryptogenic cirrhosis (12 patients) and HBV (5 patients). The median follow up was 38 months. Twenty-five patients had HCC within the Milan criteria and 7 patients within University of California at San Francisco criteria (UCSF), and 8 patients were beyond the UCSF criteria. Twenty-nine patients underwent LDLT, whereas 12 patients underwent DDLT. One patient with negative FDG-PET CT had no evidence of HCC in the explant. Of the 40 patients with FDG-PET CT and HCC, eleven patients had a positive FDG-PET (27%) with evidence of HCC in the explant, 4 within the Milan criteria, 2 within the UCSF criteria and 5 beyond the UCSF criteria. The explant showed well differentiated HCC in 5 patients, moderate ly differentiated HCC in 3 patients, poorly differentiated HCC in 1 patient and complete necrosis after the loco-regional therapy in 2 patients. Four patients died, two in each group (3 within the Milan and one within the UCSF criteria), none with HCC recurrence. Two patients died in this group, three and 87 days after liver transplantation of primary

graft non-function and infection respectively. The remaining 29 patients had negative FDG-PET CT (70.7%), 21 patients were within the Milan criteria, 5 patients were within the UCSF criteria, and 3 patients were beyond the UCSF, and the explant showed well-differentiated HCC in 8 patients, moderately differentiated HCC in 12 patients, mixed HCC and cholangiocarcinoma in one patient, and complete necrosis due to successful loco-regional therapy before liver transplant in 8 patients. Two patients died, of infection and hepatic artery thrombosis respectively.
The sensitivity, specificity, positive predictive value and negative predictive value of FDG-PET CT in detecting HCC before liver transplantation were 27.5%, 100%, 100% and 3.3% respectively.
The diagnostic accuracy of FDG-PET CT results increase as the tumor size increase, 16% for patients within Milan criteria, 40% for patients within UCSF and 62% in patients beyond UCSF.
The median 3-year survival was 81.8% and 93% for the positive and negative FDG-PET CT groups respectively.

Conclusions: FDG-PET CT has a low utility in patients with HCC within the Milan criteria and should not be routinely used as part of the liver transplant work up.

OP-12

Therapeutic Response Assessment and Outcome of Radiofrequency Ablation for Hepatocellular Carcinoma: Correlation with Histopathological Pattern

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Abstract:
Introduction: Radiofrequency ablation (RFA) is commonly applied for the treatment of early hepatocellular carcinoma (HCC). Few studies assessed the relation between histological characteristics of HCC and prognosis after RFA. Whether the histopathologic characteristics of HCC can predict local recurrence, overall survival (OS) and time to progression (TTP) after RFA were assessed in this study.

Methods: Twentyfivepatients with nodular HCC were treated with RFA in a tertiary referral center in Egypt. All patients underwent sonography-guided percutaneous tumorbiopsy and were classified as Edmondson-Steiner grade I HCC (n = 13), grade II HCC (n = 7), or grade III HCC (n = 5). All patients underwent contrast-enhanced triphasic helical CT examination before and one andsix months after RFA. The rates of RFA technique effectiveness and local tumor progression, OS and TTPwere determinedand correlated with the grade of differentiation, microvascular invasion and AFP.

Results: RFA was effective in64% and local tumor progression was found in36%. The mean overall survival was 20.5 months. Moderate and poor grades of HCC differentiation were associated with poor OS and TTP ($p<0.001$).The presence of pleomorphic or compact pattern of HCC of any percent or acinar pattern more than 30% was associated with higher rates of recurrence($p<0.02$) and poor OS ($p<0.01$), than inpresence of trabecular pattern. In addition, presence of microvascular invasion was associated with high rate of recurrence of HCC ($p<0.001$).Also, there was a significant relation between baseline AFP level and grade of differentiation($p< 0.05$), and even after RFA,AFP level remained elevated in poorly differentiated HCC than moderately and well differentiatedtumors.

Conclusion: Mixed histopathological pattern and poorly differentiated HCC, microvascular invasion and AFPwereassociated with poor OS and TTP indicating their value as important prognostic determinants.

OP-13
Y-90 radioembolization of hepatocellular carcinoma with portal vein tumor thrombus

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Abstract:
PURPOSE: Portal vein tumor thrombosis (PVT) is a late stage complication of infiltrative hepatocellular carcinoma (HCC), common in patients with hepatitis C. We present our experience treating patients with 90Y radioembolization (RE).

MATERIALS AND METHODS: From August 2011 to January 2013, 30 patients with hepatitis C and HCC with PVT were treated by radioembolization. PVT involved the main portal vein in 4 (13.4%), lobar in 16 (53.3%), and segmental in 10 (33.3%) patients. Clinical and biochemical toxicities were recorded. Tumor response was evaluated using RECIST and mRECIST criteria. Survival statistics were calculated.

RESULTS: 33 treatment sessions were performed on 30 patients using resin in 22 patients (73.3%) and glass microspheres in 8 patients (26.7%). 10 patients (33.3%) received whole liver treatment, and the remainder received segmental or lobar treatment. Median dose delivered was 1.93 GBq (range, 0.21–5.00 GBq). 14 patients (46.7%) were treated with adjuvant sorafenib starting one week after radioembolization treatment. The main clinical toxicity was fatigue (53.3%). One patient experienced grade 3 bilirubin toxicity, with no gastroduodenal ulcers. Overall and PVT response rates by RECIST were 61.9% and 66.7% and by mRECIST 80.9% and 80.9% respectively. Median survival was 6.6 months (95% CI, 3.1 – 10.2 months). mRECIST responders showed significantly better median survival than non-responders (13.3 months vs. 5.0 months) (p=0.001). Patients who died did so from progressive intrahepatic disease.

CONCLUSIONS: 90Y RE treatment for patients with genotype 4 hepatitis C and HCC complicated by PVT appears to be safe with an encouraging high rate of radiographic tumor response but limited overall survival.

OP-14

Laparoscopic Lt. Lateral bisegmentectomy for HCC: Moving from peripheral to anatomical, NLI experience.

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Abstract:
Background: The use of the laparoscopic approach for liver resections became popular worldwide and is now of increasing popularity in Egypt. This growing experience in lap. liver resections have made it more applicable in cirrhotic livers with HCC.
Aim: To assess the feasibility and safety of laparoscopic Lt. lateral liver resections in a tertiary center in Egypt

Methods: A retrospective analysis of laparoscopic liver resections was undertaken in patients with preoperative diagnoses of a hepatocellular carcinoma with compensated cirrhosis. Surgical technique included CO2 pneumoperitoneum and liver transection with a harmonic scalpel and laparoscopic Habib 4x sealer without portal triad clamping or hepatic vein control. Portal pedicles and large hepatic veins were stapled. Resected specimens were placed in a bag and removed through a separate incision, without fragmentation.

Results: From May August 2008 to December 2015, 38 liver resections were included. Eleven patients were planned for Lap. Lt. lateral resection. With the diagnosis of HCC. Mean tumor size was 5.6 ± 2.1 cm. There were 5 conversions to laparotomy; 2 cases due to bleeding , one due to stapler failure, one due to accessibility failure and one due to failure to extract the specimen. Mean blood loss was 150±75 mL. Mean surgical time was 160 +40 minutes. There were no deaths. Complications occurred in 2 patients. Only one patient developed postoperative ascites and the other developed Bile leak.

Conclusion: Laparoscopic lt. lateral bisegmentectomy is feasible and safe in selected patients with adequate training and preparartion.

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* Sustained virologic response (SVR) defined as HCV RNA <25 IU/mL at week 12 after the end of treatment.[1]

§ Long-term follow-up studies have shown that SVR corresponds to a definitive cure of HCV infection in more than 99% of cases.[2,3]

‡ 100% cure rates were achieved in GT-1 patients (treatment naive and treatment experienced) and GT-2/3 patients (treatment naive) who received a 12- to 24-week regimen of Daklinza + sofosbuvir only. Overall cure rates ranged from 91% to 98% when patients treated with Daklinza + sofosbuvir + ribavirin were included in the final analysis.[1]

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Poster Presentations

PP-15
The Effects of Human Plasma Protein Solution 5% on Blood Coagulation and Chemistry, an Experimental In-Vitro study

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Introduction: The effect of different fluids used for resuscitation was studied in the literature in vitro and in vivo, the results were different and not consistent. Additionally, different methods are used in assessing blood coagulation, which make it difficult to interpret the results.

Human Plasma protein solution "Octapharma 5%" (PP 5%) is a new colloid solution which contains 47.6- 52.5% Proteins of which Albumin represents 45.6-52.5 gm/L, and Sodium 142.5-157.5 mmol/L, and is used in resuscitation of Trauma patients and in Liver Transplant surgeries at our institution. An internal audit found that 65% of our Anaesthesiologists use Human plasma protein solution in resuscitating their patients. The effect of this solution on coagulation, electrolyte and base deficit is unknown and has not been studied to date. This study is designed to investigate the in vitro effects on coagulation of a newly used Human Plasma Protein solution 5% solution as a primary end point and its effect on blood SID, PH and base deficit as secondary end points.

Methods: In an experimental in-vitro study, different dilutions 10%-20%-30%-40%- and 50% of PP 5% solution and fresh blood samples collected from volunteers, in which one cc of PP 5% is mixed to 9 cc of blood (10% dilution), 1 cc PP 5% to 4 cc of blood (20% dilution), 3 cc of PP 5% to 7 cc of Blood (30% dilution), 2 cc of PP 5% to 3 cc of blood (40% dilution), and 2.5 cc of PP 5% to 2.5 cc of blood (50% dilution). Each volunteer donated 20-50 cc of blood, Collection of this small amount of blood was done in operating theatre and all volunteers were recruited from ASA one hospital patients, presented for low surgical risk procedures.

The Thrombo-Elasto-Graph (TEG 5000 USA computer derived) machine, was used to measure the change in impedance created by the developing blood clot as a small probe is vibrated at an ultrasonic frequency in a coagulating blood sample at 37˚C. Hemostasis measurements include in vitro bleeding time (platelet function; PFA-CT), prothrombin time (PT), partial thromboplastin time (PTT), Serum Calcium and fibrinogen levels. TEG was done for the 5 dilutions. All results were compared to the zero dilution of each volunteer (Control values). 20 volunteers wre participated in this study.

TEG measurements includes: r time, K time, α angle, ma (Maximum Amplitude), CI (Coagulation index), and LY 30 (lysis after 30 min of MA). Base deficit, PH, Albumin and SID were measured and calculated using Blood gas analyser.

Results & Conclusions: In extreme 40% & 50% dilutions, r time was found of low normal, MA still above 55 and CI -2.8 in average. Unexpectedly, the effect on base deficit was minimal. Dilutions up to 50% could be reached without the need for blood products transfusion.

PP-16
Multidisciplinary approach to treat patients with Hepatocellular Carcinoma, a single center experience

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Abstract:
Objective:To review the multidisciplinary approach in managing patients with Hepatocellular Carcinoma (HCC) at King Fahad Specialist Hospital-Dammam (KFSH-D).

Background:HCC is among the ten most common cancers worldwide, carrying a high morbidity and mortality rate. It is the most common cancer in patients with cirrhosis. As it affects the younger age group, it poses a large burden on communities. There are many treatment modalities available for treatment of HCC and multidisciplinary approach is preferred most of the time. Tumor Board at KFSH-D was established in March 2011, and since that time there has been increasing referrals of patients with HCC to our Hospital.

Results:Between March 2011 and December 2015, 263 patients were referred and discussed in LTB, 54 Patients (26.6%) underwent TACE, 32 Patients (15.7%) underwent TARE, 8 Patients (4%) had PEI, 11 Patients (5.5%) underwent RFA, 16 Patients (7.8%) received Sorafenib, 13 patients (6.5%) had liver Transplant, while 36 patients (18%) were listed on liver transplant waiting List, 2 Patients (>1%) Went for liver resection, 29 patients (14%) were referred for Palliative care (14%)

Conclusions:A multidisciplinary approach is often the best way of management of patients with HCC. We present our experience at KFSH-D and recommend its application to treat those patients in tertiary centers worldwide.

PP-17
Recurrence of Hepatocellular Carcinoma (HCC) after Living Donor Liver Transplantation (LDLT); a single Center Experience.

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Abstract:
Objectives: The purpose of this study is to elucidate the frequency of HCC recurrence after LDLT, determine the possible predictors and the prognostic factors of recurrence.

Material and Method:This record based (retrospective- cohort) study was a conjugate work between the Tropical Medicine Department, Zagazig University and the International Medical Center- Armed force (IMC). From August 2005 to August 2013, 53 consecutive adult patients underwent living donor liver transplantation (LDLT) for HCC, 50 males and 3 females. These patients have been retrospectively reviewed and prospectively followed up to determine the different prognostic factors, frequency of recurrence of HCC and the survival of the patients was recorded.
The studied patients were divided into two groups (N=53); Group I (6 patients) with intrahepatic or extrahepatic recurrence of HCC were investigated as fatal recurrence group and Group II: (47 patients) whom were without recurrence of HCC and served as non-recurrence group. The two groups were compared by demographic, clinical, laboratory, radiological and histo-pathological characteristics for their prognostic significance by logistic regression analysis.

Results: Recurrence was found in 6 (11.3%) of 53 patients and was most frequent in the liver, with no specific pattern. The univariate Cox regression analysis showed that; AFP (HR= 1.001, P= 0.006), both lobes focal lesions in the CT (HR= 8.75, P= 0.013), tumor volume in C.T (HR= 1.001, P= 0.017), the presence of L.Ns in C.T (HR= 6.995, P= 0.017) and Portal Vein Thrombosis (P=0.011) are the statistically independent predictors for recurrence.

There is a significant correlation between the preoperative AFP level and the recurrence free survival (AFp>400 ng/dl, HR=7.219, P= 0.006). The microvascular invasion in the explanted liver is shown as an independent significant prognostic factor for recurrence. The overall survival which was estimated by Kaplan-Meier method were 66.7%, 59.1% and 55.2%, and the recurrence free survival were 86.8%, 83.6% and 83.6%, for 1,3 and 5 years respectively.

Keywords: hepatocellular carcinoma, liver, liver transplantation, recurrence, Egypt

PP-18
HCC from diagnosis to treatment; 15 years of challenges and modification of resection strategies

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Abstract:
Background: Hepatocellular carcinoma (HCC) is a dismal tumor with a high incidence, prevalence and poor prognosis and survival. Management of HCC necessitates multidisciplinary clinics due to the wide heterogeneity in its presentation, different therapeutic options, variable biologic behavior especially with background of chronic liver disease.

Materials and Methods: This study is performed in a specialized clinic for HPB in Assuit university Hospital, Assuit University, and Sohag University hospital, Sohag University, Egypt. We studied different types of patient and tumor characteristics with evaluation of the surgical management applied to them. Further analysis was performed using univariate and multivariate statistics.

Results: During the period January 2000 till January 2015, 220 patients with HCC presented to our clinic. They were predominantly males and the mean age was 56.5±7.7years. All cases developed HCC on top of cirrhosis that was mainly due to HCV (71%). Most of our patients were Child-Pugh A (50%) or B (36.9%) and commonly presented with small single lesions. Trans arterial chemoembolization was the most common line of treatment used (32.4%), followed by local ablation therapy (27%). A major section of cases was palliatively treated due to delayed discovery and advanced stage of disease (63%), in the other hand, surgical resection was the gold standard in operable cases (25%). Non-anatomic open resection was the commonest procedure used in 58%, however other techniques were used as anatomic resection (27%), and laparoscopic non anatomic resection (15%), unfortunately, transplantation program does not started yet to be added in treatment. The overall survival was 80% at 6 m onths, 55% at 1 year and 20% at 2 years. Serum bilirubin, site of the tumor and type of treatment were the significant independent prognostic factors for survival.

Conclusions: early discovery by surveillance protocols is very essential for better outcome of such cases, early interference weather by surgery or local ablation is a good substitute in absence of transplantation programs. Our main prognostic variables are the bilirubin level, the bilobar hepatic affection and the application of specific treatment (either curative or palliative). Multidisciplinary clinics enhance better HCC management.
Keywords: Hepatocellular carcinoma - multidisciplinary - prognosis – survival

PP-19
Evaluation of the Therapeutic efficacies of Polyvinylpyrrolidone-Capped Silver Nanoparticles on Chemically-Induced Hepatocellular Carcinoma Model in Rats

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Abstract:
Background: Globally, hepatocellular carcinoma (HCC) is the third ranked cause of cancer-related deaths. Recent evidences showed that induction of apoptosis and anti-angiogensis are highly effective strategies for treating HCC. Silver nanoparticles (AgNP) seem to be promising in that axis of cancer therapy.

Aim: To evaluate the therapeutic effects of orally administered polyvinylpyrrolidone (PVP)-capped AgNPs on chemically-induced HHC in rats regarding the histopathological alterations, serum liver enzymes, hepatic apoptotic as well as angiogenic markers and serum alpha-fetoprotein (AFP).

Material and Methods: To induce a HCC model, 72 of total 84 adult male albino Wistar rats (180-220 gm each) were be initiated by a single intraperitoneal injection of diethylinitrosamine (DEN-in normal saline-200 mg/kg) then promoted intraperitoneally with carbon tetrachloride (CCl4) solution (CCl4/olive oil; 1:1; 1 ml/kg) three times weekly for 8 weeks. After that, PVP-AgNPs (125 and 250 mg/kg/day) were given through oral gavage for 4 weeks.

Results: PVP-AgNPs therapy showed significant reduction in elevated serum ALT, AST and AFP levels as well as hepatic IL-4, -8, VEGF, PDGF and NO levels with significant increase in caspases activities, which translated into marked improve in the hepatic architecture. PVP-AgNPs regimens (125mg/kg/day for 4 weeks and 250mg/kg/day for 2 weeks) displayed much therapeutic effects than others.

Conclusion: HCC could be challenged through the apoptotic and the antiangiogenic therapeutic efficacies of PVP-AgNPs.

PP-20

Deceased Organ Donation and Transplantation Activity in the Kingdom of Saudi Arabia; a 20 Year Perspective: 1995-2004 versus 2005-2014

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Abstract:
Objective: Organ transplantation is the best existing method for the treatment of end-stage organ failure. However, the need for viable organ supply limits its progress; thus, we studied the algorithm of process for deceased heart beating donors with the rate of adapting the critical pathways of organ donation from possible to potential to eligible to consent and to actual deceased donors (DD) in the kingdom.
Methods: A retrospective study comparing the nationwide figures and composition of the Critical Pathway of DD cases for 20 years from 1995 to 2004 compared with 2005 to 2014 of the Saudi Center for Organ Transplantation (SCOT).
Results: The study showed a remarkable increase in the total number of possible DD cases from 3689 of 1995-2004 to 5542 (+34%) of 2005-2014. The mean possible case per year in relation to the number of population for the first half of the 20 year period is 12.3 per million population (pmp) as compared to 18.4 pmp on the latter. The rate of conversion from possible to potential is 59% (2278 and 3282 respectively). Moreover, eligible donors ascend its number from 1999 to 2641 (+30.5%) of which 542 (27% with 1.06 pmp) and 952 (36% with 1.58 pmp) respectively were consented for organ donation. The actual DD for the year 1995-2004 was 493 and 839 (+41%) for the year 2005-2014. In relation to the actual DD cases, there was a significant increase of 47.6% in the number of organs transplanted, from 1106 to 2113 and in addition, there was an increase of 26.7% (613 and 837 respectively) with the tissues recovered alongside during the retrieval of DD cases.
Conclusion: There is a notable increase in the number of possible DD reported and consented in the second half of the decade. There was also a significant increase in the actual DD. In relation to this, the various strategies being implemented to promote organ donation in every region of the kingdom are relatively effective in applying the critical pathways of deceased organ donation.

PP-21
The Analysis of Discarded Deceased Organs in KSA

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Abstract:
Objective: To evaluate the rate and causes of unused organs in ten-year period.
Methods: A retrospective study was done during the period of 2000-2014, comprising the eligible, the actual, the utilized deceased organ donor cases and consented not harvested cases. Organs involved were kidneys, livers and hearts.
Results: From the total of 7323 reported cases as Possible Deceased Donors (DD), 3561 (48.6%) were approached for organ donation after declaration of Death, and 1190 (33.4%) were consented for organ donation with 1057 (88.8%) harvested, while 133 (11.2%) were rejected. From the 1190 total consented cases, 93% were consented for kidney donation. There were 1738 kidneys retrieved, 1632(93.9%) of them were utilized, and 105 (6%) were not used. All in all, 1141(95.8%) cases were consented for liver donation, 418 (36.6%) of which were rejected for utilizing mainly due to hypernatremia and elevated liver enzymes, 723 (63.3%) cases were harvested while 603(83.4% from the harvested cases) were utilized with 125 (17.2%) unused. There were 1013 (85.1%) consented for heart donation with only 196 (19.3%) were used as whole heart and 401 used as a source for valves.
Conclusion The rate of rejection to harvest were 21.3% for kidneys, 36.6% for liver and 80.6% for whole heart, mainly as a result of the donor qualities, while the rate of unused organ after harvesting for kidney is around 6% and 17.2% for liver, usually due to characteristics itself. Still, we could lessen the rate of rejection by preventing technical reasons and the much needed improvement in the area of donor management.
Keywords: Deceased Donors, Unused Organs, Rejection Rate, Saudi Arabia

PP-22

Rare Case of Recurrent Hepatocellular carcinoma More than 5 Years after Successful Liver Transplant

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Abstract:
Introduction: Liver transplant is a well known indication for treatment of HCC. We report here a case within Milan criteria that recurred more than 5 years after liver transplant.

Case report: We transplanted this patient in 8/2007 for ESLD due to possible hepatitis B (HBsAg negative and HBcAb +). The donor was her son, and she has duct to duct biliary anastomosis.
Her post op course was complicated by biliary leak and anastomotic partial breakdown and treated by ERCP and later by hepatecojejunostomy.
Her explant revealed macro and micro nodular cirrhosis with incidental 3.5 cm well differentiated HCC confined to the liver.
Her immunosuppresion was Rapamune till 2 years after liver transplant and was switched to Prograf due to heavy proteinurea (She has DM for 20 years)
She was followed regularly without complications after hospital discharge. More than 5 years after liver transplant she presented with abnormal liver tests and ascites.
Ultrasound revealed multiple well and ill-defined wide spread masses in the liver.
Her AFP was > 80 000 ng/ml.
Case was discussed with family and options of treatment were discussed, but the family decided on supportive care and the patient died after 2 months from diagnosis.
Discussion: This is a rare case of incidental HCC recurrence after liver transplant, for many reasons: First this was a small incidental HCC within Milan criteria. Second: the histology was well differentiated. Third: there was no macro or micro vascular invasion. Fourth: this occurred > 5 years after liver transplant

Conclusion: HCC can recur even with good prognostic criteria and after long duration (More than 5 years after LTX).

PP-23
Successful down staging of a large non transplantable Hepatocellular Carcinoma followed by Liver transplant

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Jordan Hospital, Amman, Jordan

Abstract:
Introduction: Large HCC is always difficult to treat with very limited options for cure. We report here a very large HCC which was down staged with multimodality treatment followed by LDLTx

Case report: a 44 years old Iraqi man was followed for HCV infection since 2007. He received multiple regimens of IFN plus Ribavirin without cure. Liver biopsy in 2010 revealed stage 5-6/6 (Impending cirrhosis), he was treated with IFN based regimen till 2013 and then was followed hoping for the new medications
In 9/2014 he had increase in AFP to75 ng/ml and a triple phase CT was negative for focal lesion (except a known liver cyst since 2004). In December 2014, he presented with variceal bleeding in Iraq and work up revealed an elevated AFP of 290 ng/ml, triple phase CT on 4/1/2015 showed huge liver mass (9 cm in segment 8) with typical HCC radiological criteria with portal vein thrombosis. Review of previous CT dated 6/9/2014 by 4 radiologists did not reveal any tumor lesions

He was treated with drug eluted Doxorubicin beads (TACE) for 4 times followed by Radiofrequency ablation. Sorafenib was given from the time of diagnosis of HCC. In August 2015, his triple phase CT, MRI with contrast and PET CT were all negative for focal lesion and near normal AFP for 2 months.
In October the 2nd 2015 he had a successful LDLTx from his brother.
The explanted liver revealed necrotic and viable malignant cells without focal lesion and small intrahepatic portal vein thrombus which was malignant. (this was negative in all radiological investigations. He is now taking Rapamune, sorafenib (which was restarted after one month of LTx), and he received Sofosbuvir/Ledapisver after 3 months of LTx and became HCV RNA negative by PCR after 2 weeks of treatment.
He developed biliary stricture and was treated with ERCP/PTC and placement of a biodegradable stent

Discussion: HCC management in cirrhosis depends on the tumor characteristics and liver disease stage. This case represents the down staging strategy even with large HCC outside transplant criteria. It was successfully down staged using Multimodality approach(TACE, RF, Sorafenib) and transplanted. This represents a complex issues including large HCC, portal vein thrombosis, and HCV infection

PP-24
Spontaneous Hepatocellular Carcinoma Rupture - case report

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Abstract:
Introduction: Hepatocellular carcinoma (HCC) spontaneous rupture is uncommon. When this occurs with active bleeding, a life threatening situation may develop with a potentially fatal outcome. The incidence may be less than 5% but it can be much higher as experienced in Asia. Trans-arterial embolisation (TAE) can control the bleeding but liver failure and recurrent bleeding may occur. In addition, a good interventional radiologist may not be available at the time of the incident and laparotomy for a resectable tumor will again be required as a second stage of the management. Emergency laparotomy on the other hand can obtain haemostasis, allow lavaging the peritoneal cavity off cancer cells and, when resection of the tumor is performed, can help to achieve cure.We report a case of spontaneous HCC rupture where an emergency laparotomy and tumor resection were done ending in a good outcome.

Methods: A 74 year old female patient known to be diabetic, hypertensive and hypothyroid, presented to emergency department complaining of abdominal pain, nausea and vomiting and abdominal distension. The patient's general condition and haemodynamics were acceptable. There was some abdominal distension and the epigastric and left upper quadrants were tender. Laboratory findings included a Hgb of 7.5 gm/dl, WBC of 20,000 , a normal LFT and a negative hepatitis serology. Resuscitation was provided and CT scan showed a complex exophytic left hepatic mass with haemoperitoneum. Exploratory laparotomy revealed a left hepatic mass, perforated and in close proximity to the left hemidiaphragm and there was a significant amount of blood in the peritoneal cavity. Resection of the tumor and peritoneal lavage were performed. The patient recovered well and was discharged on the 5th post-operative day. Histopathology confirmed a moderately differentiated HCC of 4 cm size with a perforated liver capsule. The patient received nexavar therapy for six months under the care of the oncologist.

Results: The patient's follow up of more than 18 months was satisfactory with AFP and CT scan indicating the absence of recurrence.

Conclusion: Emergency resection of bleeding HCC rupture in a stabilised patient can control the haemorrhage and remove the malignant tumor in one stage with an acceptable safety and a good outcome. More cases and a longer follow up are necessary to draw a solid conclusion.

PP-25
Molecular profile of hepatitis B and C viral infection causing Hepatocellular carcinoma in India: How does it differ from the west?

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Abstract:
Introduction: The aim of the study was to investigate the associations of hepatitis B and C virus genotypes with clinical outcome and viral load in hepatocellular carcinoma patients from northern India.

Method: The study included 365 HCC cases and 354 chronic liver disease cases without HCC as controls from L.N Hospital, New Delhi. Blood specimens were investigated for serological markers of HBV and HCV. Quantitation of HBV and HCV viral load was performed by real time polymerase chain reaction. Samples positive for HBV DNA and HCV RNA were genotyped using PCR-RFLP and confirmed by direct nucleotide sequencing.

Results: Fifty four percent of HCC patients were positive for the HBsAg and 24% were positive for the anti-HCV. HBV-DNA and HCV RNA was detected in 35.3% & 20.8% cases. With reference to low HBV DNA levels, the risk factor for HCC of the intermediate HBV DNA was 1.82 and for high HBV DNA levels were 3.64. Also, 83 patients had HBV/D and 27 patients had HBV/A and 19 patients had mixed (A+D) genotype. HBV genotype D has the highest risk of HCC (OR=2.75). With reference to low HCV RNA stratum, the hazard ratio for HCC of the intermediate HCV RNA stratum was 0.94 and that of high HCV RNA stratum was 1.45. In HCV, 66.6% patients belonged to subtype 3a and 33.3% belongs to subtype 3b. However, 36.0% represents subtype 1a and 64.0% belongs to subtype 1b. On univariate analysis, HBV DNA, HBV genotypes, male sex and older age were independent risk factors of HCC.

Conclusion: HCV and HBV infection are independent and probably additive risk factors for HCC. High HBV DNA level and HBV genotype D increased the risk of HCC in chronic hepatitis B. However neither genotype nor virus load of HCV affected prognosis of HCC patients.

PP-26

Case Presentation: Unusual presentation of hepatocellular carcinoma

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Abstract:
History: F. R. A. is a 58 years old Pakistani male patients with medical history of type diabetes mellitus, hypertention on regular medication, presented on May 2014 to the dermatology department with a nodular dark color lesion on the left nasal ala, with provisional clinical diagnosis of pyogenic granuloma, Work up for the primary,

Kidney& liver function test and CBC were normalhepatitis serology for B, C were negative,
tumor marker AFP was 2 IU/l, CEA 3.6 , CA19.9 13
PET SCAN, showed only small 1cm nodule with intense FDG-uptake at the lower part of the nasal septum on the right nasal cavity.
28/08/2014 right nasal mass &left external nasal mass excision biopsy done histopathology showed metastatic moderately differentiated hepatocellular carcinoma.
MRI Abdomen enlarged liver with cirrhotic changes with a large vascular lesion involving the left hepatic lobe and adjacent right lobe with characteristic radiological criteria of HCC with filling defect s with the left portal vein branch, middle hepatic vein and non-visualization of the left hepatic vein mostly tumor invasion
25/09/2014 ultrasound guided liver biopsy done & the histopathology confirm the diagnosis
Well to moderately differentiated hepatocellular carcinoma.
Chronic hepatitis grade III/IV, Stage III/IV

Clinical course ;
The case discussed in the Hepatobiliary–pancreatic MDT,assessment metastatic HCC , Child-pough A performance status 1(Stage C)
the plan was to go for radiotherapy to the nasal lesions and chemoembolization (TACE) for the liver lesion, then to start systemic therapy with sorafinib
hepatic embolisation done on 21/10/214 , Then the patient received 10 fraction of radiotherapy with total dose 30 Gy (02/11/2014 13/11/2014)
sorafinib started on November 2014
Reassessment after 3 months showed progression of the disease with lung metastasis, so the patient shifted to palliative and supportive care, had gradual deterioration and expired on 30th April 2015

PP-27
Transarterial downstaging of unresectable hepatocellular carcinoma with portal vein tumor thrombus by Y-90 radioembolization

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Abstract:
Purpose: Hepatocellular carcinoma is one of the most common malignancies worldwide, and the third most common cause of cancer related mortality. Surgical treatment is the only potentially curative treatment for hepatocellular carcinoma, however many patients discovered in an advanced stage of the disease and some of them with portal vein invasion which is considered as a late stage complication of infiltrative hepatocellular carcinoma (HCC), these patients are not candidate for any curative treatment but only targeted therapy or supportive treatment with only limited survival. The study is designed to evaluate the safety, efficacy as well as the potential to downstage patients with unresectable HCC and portal vain tumoral thrombosis by 90Y radioembolization.

Materials and methods: A retrospective review of 34 patients with unresectable HCC treated by 90Y radioembolization from August 2011 to August 2013, of the 34 patients, 31 patients had HCC with PVT were treated by 90Y radioembolization. The extension of the PVT was either the main portal vein in 4 (12.9%), lobar in 17 (54.8%), or segmental in 10 (32.3%) patients. Clinical and biochemical toxicities were recorded using Common Terminology Criteria for Adverse Events of the National Cancer Institute (CTCAE-NCI). Tumor response was evaluated every 2-3 months by cross-sectional imaging using RECIST and mRECIST criteria. The downstaging efficacy to Milan criteria was also evaluated. Survival statistics were calculated.

Results: 36 treatment sessions were performed on 31 patients, In 28 session (77.8%), we used resin microsphere while glass microspheres was used in 8 treatment sessions (22.2%). 7 patients (22.6%) received whole liver treatment, and the remainder received segmental or lobar treatment. Median dose delivered was 1.96 GBq (range, 0.21–5.00 GBq). The main clinical toxicity was fatigue (51.6%). One patient experienced grade 3 bilirubin toxicity, but there were no gastroduodenal ulcers or 30-day mortality. Overall response rate by RECIST were 63.6% and by mRECIST 81.8%, respectively. Median survival was 6.63 months (95% CI, 3.40 – 10.2 months), 11 patients (35.5%) were successfully downstaged to Milan criteria. Patients who died did so from progressive intrahepatic disease

Conclusion: 90Y radioembolization treatment might be used as a potentially downstage therapy for patients with unresectable HCC complicated by PVT.

PP-28
Epidemiology of metastatic hepatocellular carcinoma in a rapidly growing community

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Abstract:
Background: Our community has grown rapidly over the last few years, population has increased from 1.7 to 2.4 millions between 2011 and 2015. Newly diagnosed cases of hepatocellular carcinoma (HCC) have almost doubled during the same period.The purpose of this study is to investigate characteristics of patients diagnosed with HCC, and to identify predictors of metastatic tumors.

Patients and Methods:This study includes patients diagnosed with HCC between 2011 and 2015 in Qatar, other primary liver tumors as well as liver metastases were excluded. Data including patient and tumor characteristics, clinical and laboratory investigations at time of diagnosis and during follow-up were collected from medical records. Univariate analysis was done to identify potential predictors of metastatic HCC using Chi-square test and t-test. Multivariate logistic regression analysis was done to assess independent predictors of metastatic HCC. P-value of <0.05 was considered significant and SPSS software was used for analysis.

Results: A total of 180 patients were diagnosed with HCC, 47 of them (26%) developed metastases. There were 150 male patients, and mean age at time diagnosis was 58.8 ± 10.5 years. Follow-up ranged from 0.1 to 4.3 years with a mean of 1.0 ± 1.1 years. Single site metastasis was diagnosed in 10 patients while 37 patients had multiple sites metastases. Metastases included abdominal sites in 24 patients, thoracic in 13, bone in 7 and unusual sites in 3 patients.
Potential predictors of metastatic HCC were multi-focal HCC, bilobar lesions, macro-vascular invasion, and tumor diameter >5cm.Multivariate regression analysis showed that tumor diameter >5cm is independent predictor of metastatic HCC (OR=3.411, 95% CI= 1.607-7.242) (P=0.001).

In conclusion, metastatic HCC is not rare, it represents 26% of our cohort and tumor >5 cm is associated with high risk of metastasis.

PP-29
Liver Transplant For Hepatocellular Carcinoma Associated With Very High Serum Alfa-Fetoprotein

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Abstract:
Selection of patients with hepatocellular carcinoma (HCC) for liver transplant is still debatable, Milan criteria remain the gold standard for selection. Some centers consider biological behavior of HCC, as reflected by serum Alfa-fetoprotein (AFP), in patient selection. AFP higher than 400 IU/mL was considered as an exclusion criterion as proposed to be associated with HCC recurrence post-transplant. Here, we present a case of HCC associated with very high levels of AFP that had loco-regional treatment followed by liver transplant with no tumor recurrence 16 months post-transplant.

Case report: Here we present a case of a 55-year-old male who had end-stage liver disease due to Hepatitis C Virus (HCV) infection since 2008, and was treated with ribavirin and interferon with initial good response but he decompensated after week 28. The patient was diagnosed with HCC lesion 2.6 cm in the maximal diameter on April 2014. At time of diagnosis, patient had AFP of 341 IU/mL that jumped to 1654 IU/mL after 2 months, and to 2599 IU/mL. The patient had transarterial chemoembolization as a loco-regional therapy that showed a dramatic drop of AFP down to 21 IU/mL after six weeks.
The patient was listed for liver transplant as HCC was within Milan criteria and AFP was dropped significantly and stayed stable. He underwent liver transplant from a deceased-donor by the end of September 2014 and AFP at that time was 9 IU/mL. He had an uneventful liver transplant with uncomplicated post-operative course and was discharged in a good condition on the twelfth post-operative day with an immunosuppression regimen based on tacrolimus, mycofenolate mofetil and methylprednisolone. Methylprednisolone was withdrawn gradually till stopped by the end of 3 months post-transplant.

Serial follow-up of the patient with dynamic magnetic resonance imaging and serum AFP for 16 months post transplant showed no recurrence of HCC with normal levels of AFP.

Conclusion: Exclusion of patients based on their initial serum Alfa-fetoprotein levels at time of diagnosis of HCC could preclude patients with potentially favorable outcome.

PP-30

Hepatocellular Carcinoma Clear Variant: A rare association with Hypoglycemia, Erythrocytosis and Hypercalcemia

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Abstract:
Background: Hepatocellular carcinoma (HCC) is subdivided in several distinct histologic subgroups such as fibrolamellar,scirrhous, sarcomatous and clear cell. The implication on clinical management remains marginal with the exception of the fibrolamellar variant commonly excluded from classical HCC studies such as the SHARP-Trial (Llovet JM et al 2008)

The clear cell variant is characterized by the presence of Mallory-bodies, fibrosis, inflammation and ballooning of the hepatocytes resembling the pattern observed in steatohepatitis (Schlageter M et al 2014). The reported frequency is highly variable reaching up to 30 to 40% in some series (Lai CR 1993). Prognosis has been viewed historically as more favorable although a recent SEER analysis did not confirm this (Jernigan PL 2015). Very rare paraneoplastic syndromes have been reported in HCC with clear-cell variant: 1) association with erythrocytosis, hypoglycemia, hypercholesterolemia (Saski K 1981; Ross JS 1985) and 2) plus hypercalcemia (Chu CW 1999).

Here we report a young Nigerian patient presenting with hypoglycemia, hypercalcemia and erythrocytosis in whom an HCC clear cell variant was discovered.

Clinical presentation: A 35-year-old Nigerian gentleman presented with chronic right upper abdominal pain, nausea, decreased appetite and weight loss. On examination, the liver was palpable below the right costal margin and was tender. On admission the following lab values were noted: Hb 17.7 gm/dl, HCT 55.4%, Calcium 3.7mmol/L, Total Bilirubin 26.1 umol/L, ALP 330 U/L, ALT 52 U/L, AST 149 U/L, random Glucose 2.1 mmol/L, AFP 1453 IU/ml, Hepatitis B virus PCR positive at 4137 IU/ml. Computed tomography(CT) scan revealed a solid hepatic mass lesion 18cm in the largest dimension, multiple smaller lesions in all liver segments as well as bilateral pulmonary nodules deemed metastatic. No bone metastases were seen.

A biopsy of the hepatic mass concluded to hepatocellular carcinoma with clear cell differentiation. Treatment with Sorafenib was started synchronously with Tenofovir. Further workup of the hypercalcemia and hypoglycemia revealed PTH <1pg/mL, Vitamin D 35ng/mL, Insulin 0.7mcunit/mL (2.0-23. 0), IGF-1 66.3mcg/L (96.4-

227.8), C-peptide 0.10ng/mL (0.64-2.83). Though asymptomatic, the hypercalcemia persisted in spite of intense medical management. Similarly random glucose levels fluctuated between 1.7mmol/L and 8.2mmol/L despite continuous glucose infusion. Follow-up imaging at two months interval showed tumor progression in the liver and lung. The patient passed away three months after initial diagnosis.

Conclusion: The association of hypoglycemia, hypercalcemia and erythrocytosis with clear-cell variant of HCC is extremely rare. Pathologic analysis as well as molecular studies with new-generation sequencing are ongoing and will be presented at the congress.

OP-31

Hepatocellular Carcinoma and Spine cord compression: Are there two distinct subgroups? - Experience from Qatar

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Abstract:
Background: Spine cord compression is an oncologic emergency most frequently encountered in cancers such as prostate, breast and kidney and is treated with decompressive surgery plus radiotherapy or radiotherapy alone. Bone involvement in metastatic hepatocellular carcinoma varies between 9 to 36% based on studies from the US, Japan and Egypt (Si MS, 2003; Uchino K, 2011; Helal T, 2015). Data on spine cord compression caused by HCC are limited to case reports and a recent series from Germany (n=8) which report a more favorable outcome for patients with bone limited disease and maintained ambulatory capacity (Rades D et al 2015). We hypothesized that a better appreciation of frequency, presentation and outcome of this rare presentation would help to improve the clinical management and eventually contribute to a better understanding of HCC with bone involvement.

Methods: A retrospective analysis of all cases with hepatocellular carcinoma and spine cord compression treated at our institution between 2012 and 2015 was performed focusing on patient characteristics, treatment modalities and outcome. In a second step all HCC cases with bone involvement will be analyzed and their outcome compared to HCC with bone involvement during the same period. To ascertain quality control imaging and pathology will be reviewed centrally. Finally an exploratory analysis with protein expression (immunohistochemistry) and next-generation sequencing of all bone metastases and paired liver biopsies is planned with correlation to baseline characteristics and outcome.

Results: 9 patients (all male) with hepatocellular carcinoma and spine cord compression were retrieved. Their mean age was 56 and their ethnic background as follows: 4 Egyptians, 1 Sudanese, 1 Qatari, 1 Somalian, 1 Nigerian, 1 Pakistani. Etiology of liver disease was mainly HCV (6), HBV (1), mixed (HCV/HBV) and 1 cryptogenic. 7 patients were Child-Pugh A, 2 Child-Pugh B. 4 patients had bone only disease; 4 patients had lung. Among 4 patients with lung involvement 2 had adrenal while 2 had lymphnode involvement.

6 out of 9 patients were pretreated with sorafenib; 2 patients had a liver transplant. After presenting with spine cord compression 9 patients received radiotherapy; 1 patient was

operated upfront. Bone protective agents were prescribed in 5 out of 9 patients. Survival after spine cord compression was 8 months. One group of patients (n=4) survived between 1 to 4 months, while the survival of the remaining 5 varied from 9 months up to 18 months.

Conclusion: Outcome of HCC patients with spine cord is variable with a subgroup of patients surviving 9-18 months suggesting 2 clinically different subgroups. An updated analysis with comparison to HCC with bone disease will be presented at the congress.

PP-32
Liver Transplant for Hepatocellular Carcinoma in Qatar: An initial experience

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Abstract:
Background: Liver transplant is the best available option for early unresectable hepatocellular carcinoma (HCC). Liver transplant program in Qatar started by the end of 2011 and has progressed steadily since then, and here we report our initial experience.

Patients and Methods: From December 2011 till present, 15 patients were transplanted, 8 of them had HCC. Diagnosis of HCC was based on dynamic magnetic resonance imaging. Selection of patients was limited to patients within Milan criteria. All patients were adults and received whole liver grafts from brain-dead donors. Patients were divided into 2 groups (HCC versus non-HCC groups) for comparison. Data were summarized as mean ± SD. Survival was calculated using Kaplan-Meir curves, and SPSS software (SPSS Inc., Chicago, US, version 22) was used for analysis. P-value <0.05 was considered significant.

Results:Over a period of 4 years, a total of 15 patients were transplanted with a mean follow-up of 1.5 ± 1.3 years. The underlying liver disease was hepatitis C in 11 patients, and 14 patients were males with a mean age of 52.6 ± 7.4 years at time of transplant. The average time on waiting list was 8.3 ± 6.5 months. The average length of stay in the intensive care was 2.1 ± 0.7 days and for hospital stay was 12.5 ± 3.4 days. There was no significant difference between patients who were transplanted due to HCC and those who were transplanted due to non-HCC cause regarding age, sex, stay on the waiting list, average stay in intensive care unit and in the hospital post transplant (P-value >0.5). No reported cases of bile leak, biliary stricture, post-operative early or late bleeding, hepatic artery thrombosis, or portal vein thrombosis in both groups. One-year and overall patient survivals after liver transplant are 93% and 87%, respectively. No significant difference between both groups regarding survival post-transplant, and no reported cases of HCC recurrence after transplant. Two patients were lost, one patient in HCC group due to massive myocardial infarction 6 weeks post-transplant and one patient in non-HCC group due to liver metastasis (adenocarcinoma) of unknown origin.

Conclusion: Despite the initial small number, outcome of transplants is excellent in terms of patient survival compared to the international figures, and in terms of no surgical complications, and no recurrence of HCC. Patient selection and surgical team experience are of paramount importance to achieve such outcome.

PP-33
Hepatocellular carcinoma in Saudi Arabia: Predictive model for incidence and economic burden

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Abstract
Hepatocellular carcinoma (HCC) is a major cause of cancer-related death worldwide, and the burden of this devastating disease is expected to increase. The variability in incidence and prevalence of HCC is documented in many epidemiological studies. This may be attributed to the variation in prevalence of major risk factors such as smoking, alcohol consumption, gender, hepatitis B and C and the non-alcoholic fatty liver disease (NAFLD). In order to understand the role of such risk factors, a comprehensive surveillance and screening system must be available. We intend to use the Saudi Cancer Registry (SCR) data to establish a relationship between age, gender and the HCC incidence and the future burden in terms of the forecasted number of liver cancer cases. Moreover we shall link the information available from the Saudi Transplant Registry (STR) with a model that utilizes the number of forecasted HCC cases to predict the number of needed liver transplants, and hence the econo mic burden in the next ten years. This population-averaged model will be done using Poisson regression model for count data. The projected information will be reported (within limits of uncertainty) and is expected to play an important role in guiding health care officials and policymakers on future management plan and economic burden of HCC.

PP-34
Large Benign Hepatocellular Tumors in Children. Report of a rare case

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Abstract:
Purpose: Benign liver tumors are very rare in children. Most focal nodular hyperplasia (FNH) remain sporadic, but predisposing factors exist, as follows: long-term cancer survivor (with an increasing incidence)

Case: 4 years old boy presented with abdominal enlargement especially on the right hypochondrium.CT abdomen revealed large left hepatic focal lesion with fine septations 9.5x7.5 cm.CT guided biobsy FNH. Decision was abdominal exploration and left hepatectomy.

On operation; there was large lt,hepatic vascular tumor 10x 8 cm and resection of the mass with good safty margin after vascular control with pringle maneuver.The patient had smooth postoperative course.

Conclusion: Benign liver tumors are very rare in children .Surgery is usually performed on large hepatic lesions.

PP-35
Outcome Of Trans- Arterial Chemo Embolization (TACE) in Hepatocellular Carcinoma Patients with Branch Portal Vein Thrombosis

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Abstract:
Background and Aims: Liver cancer is the sixth most common cancer and the third cause of cancer related death and accounts for 7% of all cancers. HCC is a major health problem in Egypt and its incidence is increasing. The BCLC staging system regards portal vein invasion as advanced (stage C) disease, for which systemic therapy in the form of sorafenib is the recommended treatment .AASLD guidelines recognize radioembolization as an effective treatment, but stop short of recommending it for any specific HCC-related indication due to lack of data directly comparing it to alternatives such as TACE or sorafenib
Transcatheter arterial chemoembolization (TACE) is widely used in the treatment of HCC. Portal vein tumor invasion is a common complication in HCC, reportedly observed in 64.7% of cases at autopsy. Presence of portal vein thrombosis is one of the most significant prognostic factors of poor prognosis, and it has been reported that these patients survive only 2.7-4 months if left untreated. In advanced HCC patients with PVT, standard treatments have not been established, the BCLC staging system recommends sorafenib in these patients. In Egypt with limited resources this does not seems feasible to wide scale of our patients.

Aim: To evaluate the outcome of trans-arterial Chemoembolization in patients with branch portal vein thrombosis

Methods: Prospective interventional study. 30 patients enrolled in the study and complete follow up for 3 months.
Inclusion criteria: 1-HCC Diagnosed based on AASLD guidelines 2010. 2-Child class A. 3-Portal vein branch thrombosis. 4-No previous management for HCC. 5-Informed consent.
Exclusion criteria: 1- Child B and C. 2- Main portal vein thrombosis. 3- Previous management for HCC.
All included patients were subjected to:
1. Complete history taking and thorough clinical examination.
2. Laboratory Investigations: Complete blood count (CBC): Liver function test: Serum alpha-fetoprotein.

3. Imaging radiology: Abdominal Ultrasonography and Doppler study for detection of patency of portal vein and its branches, Abdominal Triphasic Spiral Computed Tomography (CT): for criteria of hepatic focal lesion. 4.Quality of life assessment by (QLQ)-C30 Arabic edition.
Interventional procedures: TACE procedures were performed by the interventional radiologist through femoral artery approach in all patients. Superselective cannulation of the main feeders was performed. Endpoints of conventional TACE are complete filling of the tumor vascular bed and stop-flow in subsegmental and segmental feeding arteries.
Post-Treatment Follow-Up:
All patients were subjected to follow up at 1, 3 month after the maneuver.
1- Full clinical examination,
2-Liver function tests, CBC, alphfetoprotein and renal functions, Child class, , PST state
3-Spiral CT/MRI of abdomen to asses tumor response .
4-Quality of life assessment by (QLQ)-C30 Arabic edition.

Results:
Safety of the maneuvers:No procedure-related mortality occurred among the 30 patients AND No serious complications related to the maneuver.16 patients developed ascites which was medically controlled,3 patients developed jaundice and 1 patient complicated by hepatic encephalopathy .
Effect on Child score: By the end of follow up period about 37 % of patients (11 patients) were child A and about 63% of patients (19 patients) were child B .
Efficacy of the procedure:By the end of three months 21 patients (70 %) had completed response to TACE, 3 (10 %) Patients showed partial respond to TACE and were prepared for another session of TACE and 6 patients (20%) had partial response to TACE but unfortunately they were not fit for further intervention.
Effect on QOL score:The parameters of the QOL scores decrease after one month of intervention with the means of global health scale , the mean of functional scale and the mean of symptoms scale were 74.94 % , 83.96 % and 25.29 % respectively . Also the means of global health scale, the mean of functional scale and the mean of symptoms scale were 68.86 %, 81.20 % and 25.31 % respectively after three months of intervention.
TACE slightly affected the QOL score with the mean of global health scale, functional scale, and symptoms scale were 68.86 % , 81.20 % and 25.31 respectively . Also QOL scores showed variability according the degree of response to TACE with the global health scale mean was 74.96 % ,62.50% , 35.33% and 49.99% in case of CR ,PR ,SD,PD .And the mean of functional scale was 89.37 % ,72.83% , 76.66% and 50.96% in case of CR ,PR ,SD,PD respectively . As regard he the symptoms scale the mean was 17.53%, 39.37%. 26.41% and 38.25% in case of CR, PR, SD, PD respectively

PP-36
Efficacy of loco-regional treatment for Hepatocellular Carcinoma Prior to Living Donor Liver Transplantation

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Abstract:
Background: Hepatocellular carcinoma (HCC) is the fifth most common malignancy in the world. It causes an estimated 1250000 deaths every year worldwide. The therapeutic approach for HCC has changed significantly in the past decade HCC was considered a contraindication to liver transplantation (LT)in many transplantation centers in the early 1990s now, liver transplantation is the best available option for early hepatocellular carcinoma (HCC) its application is limited by stringent selection criteria .Milan criteria have remained the paradigm for the selection of the best candidates for LT in the past 10 years Down-staging of HCC is an attractive alternative to simply expanding the tumor size limits to meet Milan criteria. Loco-regional therapies used for down staging, laparoscopic radiofrequency ablation (RFA) and Transcatheter arterial chemoembolization (TACE)

Aim: The aim of this study was to evaluate the outcome Of HCC patient after liver transplantation who received pre-transplant loco-regional treatment.

Materials and methods: Data was retrieved from the files of patients with (HCC) who underwent liver transplantation and received pre-transplant loco-regional treatment during the period from December 2011till December 2013. (A) Pre-treatment assessment including Full personal history taking and thorough clinical examination, Alpha fetoprotein (AFP) level, Child Pugh score, MELD score, waiting time for liver transplantation., abdominal ultrasound and duplex, triphasic spiral CT or MRI abdomen before and after loco-regional therapy B) Histopathological evaluation of the explants: including :number of HCC nodules, size. Grade based on the Edmondson and Steiner criteria, presence of viable malignant cells and microvascular or capsular invasion.

Results: The mean age for the enrolled patients was 52±7.04, 93.1% were males, mean MELD was 8.23±1.89, 41.38% were Child B, and 10 patients were Child C. Mean waiting time from the last intervention to transplantation was 8.48±6.83 months, mean AFP before locoregional therapy was 308±1240 ng/dl while after locoregional therapy it became 47.41±112.15 ng/dl (p=0.013). Twenty two patients were within the Milan criteria and 7 patients were beyond Milan criteria. Eighty focal lesions (range 0.6-6cm; mean: 2±1.09cm) were subjected to locoregional therapy; 10 patients underwent RFA, 11 patients had TACE, one patient underwent microwave ablation and

7 patients had several sessions of RFA and TACE. The histopathological findings of the explanted livers showed complete necrosis in 28 lesions, partial necrosis in 3 lesions and 21 lesions turned to be macro degenerative and dysplastic nodules. There was statistical significant discrepancy in total focal lesions size betwee n the results of the last triphasic CT before transplantation and the histopathological findings (p=0.01) ;also ,there was statistical significant differences between both as regards the interpretation of well ablated lesions (complete necrosis) (p=0.001).However, there was no statistical significant difference between the imaging modality and histopathology regarding the number of focal lesions(p=0.14)

Conclusion: Locoregional therapies provide good option for patients on waiting list for liver transplantation, and patients not fulfilling Milan

PP-37
Postoperative Thrombocytopenia Aggravates Hepatic Dysfunction and Mortality after Liver Resection for Hepatocellular Carcinoma

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Abstract:
Background: Blood platelets are critical for stimulation of liver regeneration through their contents of serotonin. Reduced platelet count may contribute to deterioration of the clinical outcome after liver resection for hepatocellular carcinoma (HCC).

Methods: Medical records of patients who underwent liver resection at Sohag University Hospital (February 2012 - September 2015) were analyzed. Emergency and pediatric patients were excluded. Two groups of patients who were operated for HCC versus other indications and matched for gender, age, American Soceity of Anesthiologists (ASA) score and number of resected segments were identified. Incidence of reduced postoperative platelet count < 100,000/µL versus ≥ 100,000/µL, postoperative complications according to Clavien system, frequency of liver failure and mortality were compared between both groups. Statistical analysis was carried out by GraphPad Prism 6.0 software.

Results: Twenty patients were enrolled (ten patients per group). All patients in the HCC group were cirrhotics. Indications of liver resection in the non-HCC group entailed metastasis and benign liver lesions. Reduced postoperative platelet count < 100,000/µL was encountered only in HCC patients. This group exhibited higher complication rates ($p < 0.05$), increased length of intensive care unit stay ($p < 0.05$), higher levels of bilirubin and transaminases and reduced prothrombin concentration ($p < 0.05$). Mortality occurred only in HCC patients with reduced postoperative platelet count (two patients) compared with no mortality in the non-HCC group.

Conclusion: The increased susceptibility for reduced platelet count after liver resection in HCC patients is related to preexisting cirrhosis. Concomitant reduction in postoperative platelet count and liver cirrhosis are associated with worse clinical outcome after liver resection for HCC.

PP-38
Evaluation of the ALBI Score as a Prognostic Indicator in Egyptian Patients with Hepatocellular Carcinoma

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Abstract:
Introduction: The Child-Pugh (CTP) score forevaluation of liver function statushas limitations as it relies on individual subjective variablesas ascites and encephalopathy that are scored based on arbitrarily defined points. The albumin-bilirubin (ALBI) (reference) score eliminates the need for the subjective variables required in the CTPgrade and offers more precise selection of patients with HCC for treatment allocation.

Methods: This study was conducted on 1185 patients with HCC ina tertiary referral center in Egypt. Baseline characteristics including CTP, BCLC and ALBI scores were determined.Patients were followed up from the time of diagnosis to the date of death or date of data collection if they remained alive. Overall survival and the received treatment were determined. Survival data were analyzed using Kaplan Meir Survival curves using log rank test and multivariate analysis.

Results: For 1185 patients, mean age was 57 years, 986 were males.At presentation, 57.1% were CTP A, 34.5% were CTP B and 8.3 % were stage C, 37.8% of patients were BCLC A, 30.3% of patients were BCLC B, and 23.7% of patients were BCLC Cand 8.2 % of patients were BCLC D, and 15.8%, 62.7% and 21.5% were ALBI 1, 2 and 3 respectively. Of 676 CTP A patients, 26% had ALBI 1 and 73.7% had ALBI 2 while 0.3% had ALBI 3.
The median overall survival was 24.8 months while median survival for ALBI 1,2,3 were 33, 24, and 11 months respectively($p<0.001$). In addition, Multivariate analysis showed that ALBI was an independent prognostic factor for OS ($p<0.001$).

Conclusion: ALBI grade isan independent prognostic factor and is found to be a better score for evaluation of liver functional status than CTP score to distinguish patients with better hepatic functions, and thus will offer more precise patient selection for different treatment modalities.

Reference: Johnson PJ, Berhane S, Kagebayashi C, et al., Assessment of liver function in patients with hepatocellular carcinoma: a new evidence-based approach-the ALBI grade. J Clin Oncol. 2015 Feb 20; 33(6): 550-8.

PP-39
Neutrophil-to-Lymphocyte Ratio Change Predicts Survival of Patients with Hepatocellular Carcinoma Undergoing Trans-arterial Chemoembolization

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Abstract:
Introduction: An elevated neutrophil-to-lymphocyte ratio (NLR) detected before initiation of treatment has been found as a prognostic factor for hepatocellular carcinoma (HCC) patients after different treatment modalities (reference). However, the change in NLR after therapy has not been studied in patients undergoing trans-arterial chemo-embolization (TACE).

Methods: One hundred and three consecutive patients with intermediate stage (BCLC B) HCC treated with TACE were prospectively evaluated. The NLR was recorded within 3 days before and 1 month and 6 months after TACE. Baseline characteristics including Child-Turcotte-Pugh (CTP), BCLC, performance-status (PS) and therapeutic response were correlated to pre/ post-procedure NLR change.

Results: The mean age was 58.6 ±8, 84.5% were male, 85.7% had multiple focal lesions. The mean AFP level was 664 ng/ml. The overall response rate was 68% and 24% after 1 and 6 months respectively.
One month after TACE, post-procedure NLRdecreased in 39 patients and increased in 64 patientscompared to pre-procedure NLR level. No significant differences were identified between responders and non-responders regarding the baseline clinic-pathologic features. Elevated post/pre-procedure NLR was found in 48.5% of responders and 77.1% of non responders, while decreased post/pre-procedure NLR was found in 51.5% of responders and 22.9% of non responders [(p=0.01; OR: 3.58 (1.42-8.99)].

Conclusion: The post/pre-procedure NLR change may be an indicator for therapeutic response in patients with intermediate stage HCC undergoing TACE.

Reference: Xue TC, Zhang L, Xie XY, et al., Prognostic significance of the neutrophil-to-lymphocyte ratio in primary liver cancer: a meta-analysis. PLoS One. 2014 May 2; 9(5): e96072.

PP-40
Difficulties of living donor liver transplantation for hepatocellular carcinoma patients

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Abstract:
Introduction: Living donor liver transplantation (LDLT) can provide life-saving therapy for many patients with hepatocellular carcinoma (HCC), who otherwise would succumb due to tumor progression. Offering LDLT to patients with HCC, however, raises complex issues for the donor, the recipient, and the medical team.

Methods: The records of patients with HCC among the 246 recipients who underwent LDLT at National Liver Institute (NLI), Menoufiya University, Egypt, from April 2003 to January 2016 were retrospectively revised. The aim was to answer several questions: Should we expand the criteria for liver transplantation for HCC? What is the response to loco-regional therapy and role of tumor down-staging? What are the difficulties of evaluation? Is there especial technique considerations? What about the outcome and recurrence?

Results: HCC was the indication of LDLT in 65 (26.4%) of cases. Of these HCC cases, 55(85%) cases were within Milan criteria, 5 (7.6%) cases had benign portal vein thrombosis (PVT). positron emission tomography (PET) was performed two weeks before LDLT to exclude distant HCC metastases. Exploration-first and Portahepatis-first were the used techniques. Three (4.6%) cases had recurrent HCC

Conclusion: Milan criteria remain a valid tool to select candidates for LDLT to achieve optimal results but expanding the criteria give chance to more patients with comparable outcome. Alfa-fetoprotein (AFP) of 1000 ng/mL should be considered an exclusion criterion for liver transplantation. PET scan might be of particular value in excluding extrahepatic HCC extension. Benign PVT does not contraindicate LT for HCC patients. Exploration-first and Portahepatis-first techniques are recommended in HCC cases

PP-41
Validation of The Intermediate Stage Hepatocellular Carcinoma Subclassification in Egyptian Patients

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Abstract:
Introduction: The intermediate stage of HCC (Barcelona Clinic Liver Cancer, (BCLC) B) contains a wide range of different population with varying tumor burden and liver function (Child–Turcotte–Pugh (CTP) score of 5 up to 9), provided that there is no vascular invasion, extrahepatic spread, or compromised performance status. This makes it difficult to predict their outcome and allocate treatment. Bolondi et al., (ref) proposed a subclassification of intermediate stage HCC patients with good performance, yet, not validated in an Egyptian cohort.

Methods: This study was conducted on 707 patients with intermediate stage HCC in a tertiary referral center in Egypt. Baseline characteristics including CTP, performance status (PS), AFP, and treatment modalities were determined. Patients were followed up from the time of diagnosis to the date of death or date of data collection if they remained alive. Overall survival and the received treatment were determined. Patients were subclassified using the Bolondi subcalssification. Survival data were analyzed using Kaplan Meir Survival curves using log rank test and multivariate analysis.

Results: The mean age was 57 years, 81.8% were males, 43% had AFP>200 ng/ml and 91% received TACE. At presentation, 49.8% were CTP A and 50.2% were CTP B, and 21.2% were subclassified into subclass B1, 32.5% into B2, 19.8% into B3 and 26.6% into B4. The median overall survival was 18 months while median survival for BCLC B subclassification B1, B2, B3 and B4 were 33, 22, 15 and 14 months respectively ($p<0.001$). In addition, Multivariate analysis showed that BCLC B subclassification was an independent prognostic factor for OS (HR: 1.23, 95% CI: 1.23-1.59, $p<0.001$).

Conclusion: BCLC B subclassification is an independent prognostic factor and can distinguish intermediate stage HCC patients with favourable outcome, narrowing the wide heterogeneity of intermediate stage HCC and thus will offer more precise patient selection for treatment allocation.

Reference: Bolondi L, Burroughs A, Dufour JF, et al., Heterogeneity of patients with intermediate (BCLC B) Hepatocellular Carcinoma: proposal for a subclassification to facilitate treatment decisions. Semin Liver Dis. 2012 Nov; 32(4): 348-59.

PP-42
Nexavar for treatment of advanced HCC, real-life data from Saudi Arabia.

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Abstract:
Background: Management of advanced hepatocellular carcinoma (HCC) is still a challenge to physicians. The disease carries a very poor prognosis with an expected survival of 4-6 months. Till recently, no chemotherapeutic agent has been proven to improve the clinical outcome in such patients. Sorafenib, a multikinase inhibitor, has emerged as the only effective treatment with significant improvement in survival in patients with advanced HCC based on two large randomized clinical trials.

Aims: To assess the efficacy and safety of sorafenib in the treatment of advanced HCC outside clinical trials.

Materials & Methods: A retrospective chart review of patients with advanced HCC treated with Sorafenib in a single tertiary centre between June 2008 and April 2013 was carried out. Patients were included if they were prescribed sorafenib and had at least one follow up after starting treatment. Demographic, clinical, biochemical and radiological data were collected. Primary end point was the overall survival. Side effects were recorded whenever available together with radiological response.

Results: A total of 63 patients were included in the analysis. Males were 50 (79.4%%) and the mean age was 65.5±9.9 yrs. Fifty percent of patients were diabetic and 58 pts (92.1%) were cirrhotic. HBV infection was the primary cause of liver disease in 24 pts (38.1%) while HCV was the cause in 21 pts (33.3%). Distant Metastasis was found in 14 pts (22.2%), lymph node enlargement in 16 pts (25.4%) and portal vein thrombosis in 7 pts (11.1%). Twenty three patients (27%) had previous procedures. Forty two patients had child A score at the start of treatment, 17 were child B and 2 had child C disease. The median overall survival was 11.3 months. Survival at 1 year of treatment was 55%. Side effects were reported in 20 patients and the commonest were diarrhea and skin rash. Poor predictors of survival were Child score above 6 and distant metastasis.

Conclusions: Efficacy of sorafenib in treating advanced HCC in real-life data was very similar to phase III clinical trials. Impaired synthetic liver function predict shorter survival and thus selection of patients is important to optimize the response to treatment.

PP-43
Pattern of Presentation and Treatment of HCC in PSMMC

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Abstract:
Background:Hepatocellular Carcinoma is a leading cause for morbidity and mortality in patient with chronic liver disease. It usually occurs on top of cirrhosis which is predominantly caused by viral hepatitis. Several therapeutic modalities been tried in patients with HCC and these therapies depend largely on the patient's functional status, tumor extent and the health expertise. Few reports in Saudi Arabia have described the disease presentation and treatment outcome.

Objectives: To study the pattern of presentation and Treatment modalities of Hepatocellular carcinoma in PSMMC over the last 10 years

Methods and Material: A retrospective chart review of 176 patients diagnosed with hepatocellular carcinoma based on histology findings or typical radiological features from January 2003 till Dec 2012 was done. Data collected were demographic, biochemical, radiological and histological data. Treatment modalities were recorded together with treatment outcome whenever available. Data were analyzed descriptively and comparison done between groups to identify predictors of poor outcome

Results:A total of 176 patients were included. The median follow up was 14.5 months. Males constituted 77% of this cohort with a M:F ratio of 3.3:1. The mean age was 66 ± 10.7 years. Ninety percent of these patients were Saudi. HCV was the commonest cause for underlying liver disease (45%) and HBV was the second commonest (27%). Sixty Patients (34%) were asymptomatic at the time of diagnosis. Of those who had symptoms, abdominal pain and abdominal distension were the commonest symptoms (41 & 28 % respectively). Co-morbid diseases were found in 62% of the patients, the commonest of which is DM (58%) and hypertension (44%).

Cirrhosis was present in 87% of cases. One third of the patients had evidence of decompensation on presentation and the tumor was advanced (beyond Milan Criteria) in 82(47%) of the patients. Old age and higher BMI were not associated with more advanced disease while DM and HCV infection were more frequent in patients with less advanced disease (p value: 0 .028 and 0.002 respectively). Six patients had surgical resection, 54 patients were treated with Nexavar, 75 patients had RFA and 54 patients had TACE (conventional or DC beads). A total of 41 (24%) patient died during the follow up period however 57 patients lost their follow up.

Conclusions: Hepatocellular carcinoma is a complex disease with variable presentation. It is more prevalent in HCV infected patients with cirrhosis. The disease is advanced (beyond liver transplantation criteria) in almost 50% of the patients. The treatment outcome could not be accurately assessed due to lack of follow up information. This should warrant a more comprehensive surveillance program for early detection and better follow up system.

PP-44
The impact of nutritional status on sorafenib outcome in patients with advanced HCC.

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Abstract:
Background: Based on phase III randomised controlled trials, Sorafenib was found to improve survival in patients with advanced hepatocellular carcinoma. The impact of nutritional status on treatment outcome is not well studied. Both body mass index (BMI) and albumin level reflect roughly the nutritional status of the patients. Modified BMI (mBMI) which is calculated by multiplying both was found to predict outcome in liver disease particularly post liver transplant patients.

Aims:To assess the impact of nutritional status on sorafenib outcome in patients with advanced HCC.

Materials & Methods:
A retrospective chart review of patients with advanced HCC treated with Sorafenib in a single tertiary centre between June 2008 and April 2013 was carried out. Patients were included if they were prescribed sorafenib and had at least one follow up after starting treatment. Demographic, clinical, biochemical and radiological data were collected. Modified BMI was calculated at time of starting treatment. Primary end point was the overall survival. Data were analysed with SPSS 17.

Results: A total of 63 patients were included in the analysis. Males were 50 (79.4%) and the mean age was 65.5±9.9 yrs. HBV infection was the primary cause of liver disease in 24 pts (38.1%) while HCV was the cause in 21 pts (33.3%). Forty two patients had child A score at the start of treatment, 17 were child B and 2 had child C disease. The median overall survival was 11.3 months. Median BMI and serum albumin were 26.7 kg/m^2 and 35 gm/l respectively. The median overall survival for patients with mBMI of 900 or above was 17.2 months while for those with mBMI less than 900 it was 10.3 months (p= 0.583).

Conclusion:Efficacy of sorafenib in treating advanced HCC is not significantly affected by baseline nutritional status of the patients however patients with better nutritional status may have longer survival. This finding needs to be confirmed in larger clinical trials.

PP-45
Malignant Obstructive Jaundice in the NCI Cairo University

Mohammed Gamil, Nelly Hassan Ali Eldin, Ali Hassan Mebed, Ashraf Sobhy Zakaria
National Cancer Institute Cairo University, Egypt.

Abstract:
Background: Obstructive jaundice is a common problem in the medical and surgical gastroenterological practice. Malignant obstructive jaundice can be caused by cancer head of pancreas, periampullary carcinoma, carcinoma of the gall bladder and cholangiocarcinomas.

Objective: To review the Evaluation of malignant obstructive jaundice in NCI Cairo university during a period of 3 years (2008 till 2010).

Patients and methods: Retrospective study including 232 patients who presented with malignant obstructive jaundice between (2008 to 2010). Data were collected from the biostatistics and cancer epidemiology department.

Results: Out of 232 patients; 156 (67.2%) were male and 76 (32.8%) were female; the median age of the study population was 49 years (range 19-80years).The commonest cause of malignant obstructive jaundice was pancreatic head cancer, 72% (167/232), followed by the ampullary carcinoma 15% (36/232).The last cause was cholangiocarcinoma12.5% (29/233).Regarding the commonest symptom; clay colored stools (98.7%) was more frequent in patients with malignant disease whereas abdominal pain (97.7%) was 2nd common symptom.

Conclusion: Obstructive jaundice is more common among males and cancer head of pancreas is the commonest malignancy.US, ERCP and CT-Scan are important diagnostic modalities for evaluation of patient with obstructive jaundice with ERCP having the additional advantage of being therapeutic as well.

Keywords: Obstructive jaundice, ERCP, Ca Head of pancreas, Ca gall bladder.

PP-46
Extrahepatic Bile duct carcinoma in Mauritania

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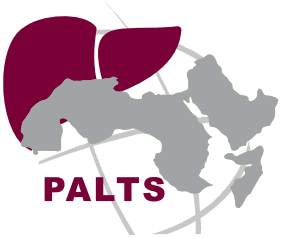
Abstract:
Aims: The authors report a retrospective descriptive study of 36 cases of malignant tumors of the extrahepatic bile ducts (EHBD). The aim of this study was to assess the management and profile of EHBD general surgery clinic of the National Hospital of Nouakchott in Mauritania.

Patients and Methods: Over a period of five years 1407files EHBD were found. Were excluded all non suspected malignancy of EHBD. Were included 36 cases with suspected malignant tumors EHBD calculi or confirmed cancer. Databases were statistically analyzed by SPSS system and the variables studied were: age, gender, ethnicity, previous history, clinical, Biology, and US, CT-scan, surgery, and the postoperative length of stay.

Results: There were 30(83.3%) women and 6 (16.7 %) men, the average age was 65.47years (32 - 80 years) , the median was 70.0ans . The Moorish ethnic group is dominant. In history there were 4 (11.1 %) cholecystectomies and 2(5.6 %) goiters. Operative risk with ASA III and IV were found in 6 (16 %) patients. Clinically the isolated pain RUC was found in 8 (22.2 %) , pain associated with weight loss has a poor general condition in 6 (16 %) patients , pain with jaundice and fever 4 (11.1%) cases. Jaundice and pain alone in 12 (33.3 %) cases . Pain with palpable abdominal mass in 2 (5.6 %) cases . Biologically leukocytosis was found in 6 (16.7 %) cases and chole stasis with cytolysis in 4 (11.1 %) cases . Liver failure was disclosed in 2 (5.6 %) patients. Tumors markers were requests in 13(36.1%) cases. Radiologically 28 (77.8 %) patients underwent ultrasound and there were : 10 (27.8 %) cholecystitis multilithiasis, 4 (11.2 %) scleroatrophiques , 4 (11.2 %) expan sion of the CBD , and 4 (1.2 %) Hilary invaded . The calculoK was reveled in ultrasound 4 (11.2 %) times which 2 (5.6 %) cases of ascites. Two cases of cholelithiasis . 18 (50%) cases underwent CT- scan and it was contributory in 10 (28 %) cases with Hilary 2 plates , 2 calculoK 2 cholangioK , 2 cases of thrombosis of the IVC on Hilary plate and 2 liver invasion . There were 6 cases of expansion of CBD to in CT-scan. MRI was requested 2 times and it was non-contributory .Thirty (83.3 %) patients underwent surgery by laparotomy and intraoperative discovery has revealed 26 (72.22 %) calculoK, 4 (11.1 %) liver invasion, 2 (5.5 %) cholangioK , 2 (5.5 %) locations at the bifurcation biliary duct and 2 cases of cholecystitis . Drainage was carried in 16 patents including 4 (11.1 %) cases of bile drainage. Associated pathologies were essentially pancreatic tumors (5.6 %) and renal cyst (5.6 %) . The average duration of hospital stay was 8 days (range 2–22days).

The immediate postoperative complications was favorable in 90% of cases and there were 10% of infected patients postoperatively. Eight (22.2 %) cholecystectomies were performed , with 10 (27.7 %) biopsies , 4 (11.1 %) return. The pathological findings showed a large predominance of adenocarcinoma (95.4 %) well-differentiated follicular and 4.6 % of liver metastases and hepatocellular carcinoma infiltrating the gallbladder.

Conclusion: The EHBD is a very serious condition due to a late diagnosis and a care-optimal in Mauritania. But the prognosis can be improved by educating patients, especially multidisciplinary involvement surgeons, gastroenterologists, anesthetists and radiologists



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