Report for the Ronald Raven Travelling Scholarship 2013

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I would like to thank BASO for the Ronald Raven Travelling Scholarship in supporting me to travel to one of the most renowned international institute for hepato-pancreato-biliary (HPB) surgery and live-related liver transplantation.

Objectives and Reasons for my visit to Queen Mary Hospital (QMH):

As a HPB trainee in the UK, my liver training focused mainly on the management of colorectal liver metastases. The advanced surgical management of hilar cholangiocarcinoma and hepatocellular carcinoma (HCC) were limited in most HPB centres in the West, as compared to the Far East.

Having increased in the surveillance of HCC in cirrhotic livers and the rise in epidemic of hepatitis C in the UK, it has been suggested that there will be a rise in the incidence of HCC. It is therefore important to gain exposure of advanced surgical management in complex hilar cholangiocarcinoma as well as HCC from the Far East.

My choice to go to QMH of Hong Kong was an easy one. First, HCC is the 3rd most common tumour in Hong Kong, and the department of HPB/liver transplantation is world renowned for their advanced surgical and oncological management of complex liver tumours with/without cirrhosis. Secondly, with over 1000 live-related liver transplantations having been performed in Queen Mary Hospital, its exposure will provide an unique experience for any HPB surgeons.

On arrival:

My arrival to Hong Kong was only few weeks prior to the celebration of the Chinese New Year of Horse. I was invited by the Department of Surgery to join their annual Chinese New Year dinner. It was an interesting experience (see pictures below).

I stayed in a serviced apartment at Sheung Wan, which was approximately 15 minutes away from the hospital by bus. The cost of the accommodation was very expensive.

QMH locates up in the hill of the west of Hong Kong Island. On my first day, I was made welcome by the administrator of the Department of Surgery, Mrs Gloria Wong. I was presented with a video of histories and subdivisions of the Department of Surgery, and was then introduced to the whole HPB team.

Healthcare system in Hong Kong

Hong Kong healthcare system is equally mixed between both public and private sectors. The demand for services in the public sector is very high. There is a constant pressure for patients with suspected malignancy to pursue private diagnostic imaging for a quicker diagnosis. Should any of these investigations not available in the public sector and the patient not be able to afford the scan, patient has to apply for funding from social welfare department, which takes time.

Because of the close proximity in location between hospitals in Hong Kong, there is a tendency for self-referral to different specialist clinics for "second" opinion. With the international reputation of the HPB/Liver transplant services in QMH, approximately 60 – 70% of oncological HPB resections in the Hong Kong are currently undertaken in QMH.

Despite these self-referrals to different hospitals, medical records from all hospitals are fully accessible through a centralised web-based clinical management system. This system has been implemented for nearly 10 years now in Hong Kong, and included all the radiological investigations performed by any public hospitals. This has significantly minimised the amount of time in retrieving those information, as well as the cost in performing duplicated investigations.

Weekly routine

There are 2 wards (male and female) for HPB Surgery, and one ward for liver transplantation. Each ward has just over 30 bed spaces. Extra folding beds are sometimes deployed depending on demand of hospital service. HPB surgery and liver transplantation are managed by 2 separate teams.

There are 2 multi-disciplinary team meetings every week. One is to discuss complex HPB cases, and the other is to discuss complex HCC cases. Medical oncologists are always present in those meetings offering their oncological opinions.

I was particularly impressed with the organisation of 2 early morning weekly meetings for the whole department of surgery. These meetings were compulsory for all surgical team members, including professors of all surgical subspecialties. One of them is a research meeting for case presentation and to discuss the latest advanced surgical development; and the other meeting is to discuss all patients with significant postoperative morbidities (clavien-dindo grade IIIb or above), and all surgical mortalities. Professors of all subspecialties would contribute their expert opinions regarding how best patient should be managed in each case. I learnt some valuable lessons through those difficult case discussions.

In QMH HPB surgeons perform their own ERCPs as well as EUS. There are 4 regular ERCP lists per week performed by surgeons from both HPB and transplant teams. HPB specialists were in charge of the lists, which did not seem to have a strict limitation to the total number of patients that could be placed on the list. Most of the patients received their ercp procedure within 1-2 days from listing.

Surgical pathologies and Operations

There are 5 full day operating sessions per week for HPB surgery, and another 2 full day sessions for liver transplantation.

As in the UK, gallstones disease is one of the commonest HPB pathology that is managed in Hong Kong. However, there were many more patients presented with common bile duct stones and recurrent pyogenic cholangitis (RPC) in Hong Kong. RPC is something that I rarely saw or managed in the UK.

The other pathology that commonly presented in Hong Kong as an emergency HPB oncall was RUQ mass/pain due to either ruptured or incidental HCC. Most of these patients will inevitably be found to have underlying viral hepatitis infection. This again is a big contrast to the patient population in the UK.

Over seventy percent of the HPB operations were for the resection of HCC with liver cirrhosis, as compared to colorectal liver metastases in the UK. Instead of following the Barcelona Clinic Liver Cancer (BCLC) management guideline, Hong Kong follows the more aggressive Asia-pacific Consensus for liver cancer. During my time in Hong Kong, I have witnessed and participated in some ultra major resections for HCC in cirrhotic livers, with combined portal venous or IVC resections. These cases would normally be considered as unresectable following the BCLC guidelines.

With the backup and surgical experience of live-related liver transplantations, those advanced surgical techniques were also translated into the oncological resection for biliary and pancreatic tumours, when adjacent venous and arterial structures were involved with the tumours. For instance, it was an eye opening experience when I witnessed the resection and primary anastomosis of superior mesenteric artery (SMA) during a whipple procedure. As with the Japanese, QMH would not consider venous encasement an absolute contraindication for Pancreatico-duodenectomy. In addition, the unit advocate an extensive lymphadenectomy, including celiac lymphadenectomy.

Understandably, all these patients undergoing such ultra major resections will have degree of morbidities afterwards. There was no mortality during my stay with the unit. Despite this, I noticed a major difference in terms of co-morbidities and body mass index between the Chinese and the British. The Chinese are much slimmer and have limited co-morbidities.

Liver living donor transplantation programme is another impressive element in the QMH. Since the performance of the first live-related liver transplantation by Prof ST Fan back in the 90s, QMH has now performed more than 1000 living donor liver transplantation. During my stay, I have witnessed at least 3 living donor transplantation, which is not an operation that a UK HPB trainee witnesses on a regular basis.

Research and Clinical Data

QMH HPB and liver transplantation is a world renowned institute for their clinical as well as their academic achievement. One of the major reasons for their success is likely due to their well established prospective database.

There is a team of more than 10 research staff, whose primary aim is to ensure an accurate clinical data for each patient being referred to the unit. The database has full clinical data dated back to 1989.

There is also a team of scientists in the University working closely with the clinicians, who provide tissue samples for tissue bank and basic science research. In addition, photographs were taken at different stages of each operation for a weekly case review and discussion.

Conclusion

Overall this fellowship has provided me with an in-depth exposure to the management of advanced HCC, and live-related liver donor transplantation. In addition, it is an interesting and valuable experience to work in another healthcare system outside the NHS. I am extremely grateful for Professor Graeme Poston, Mr Hassan Malik, Professor R Poon of the Hong Kong University, Professor CM Lo, and BASO for supporting me in this fellowship.

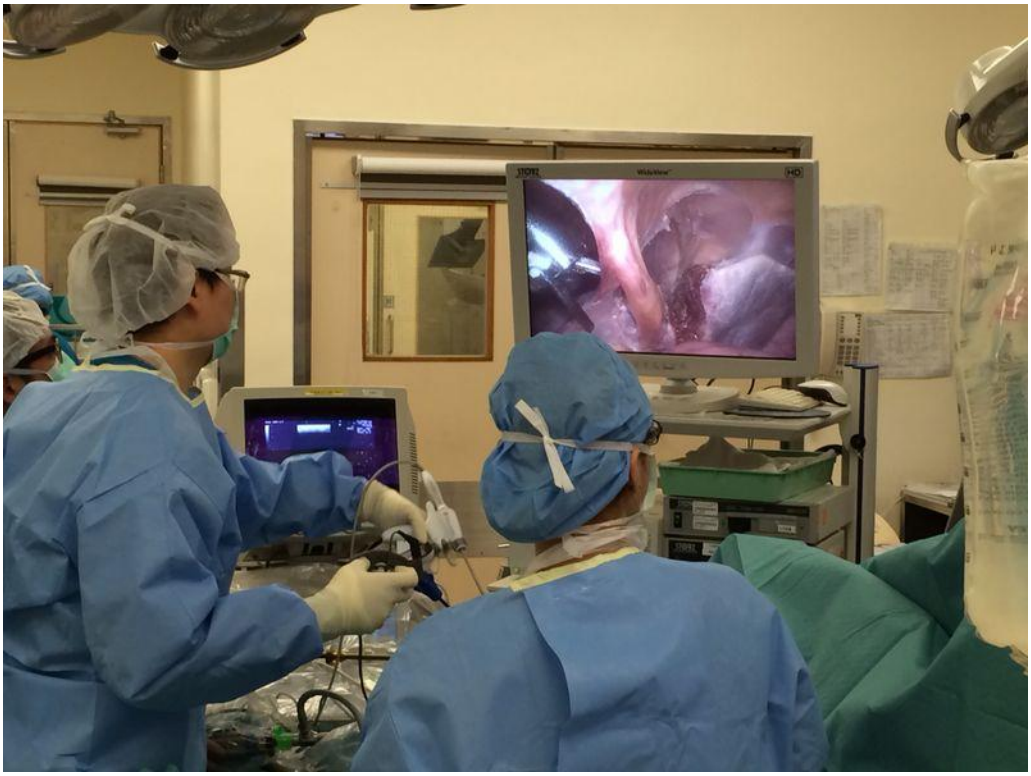
Pictures:

Other travelling fellows from the USA and Saudi Arabia during the Chinese New Year gathering

Team members of the HPB and Transplant team of the QMH. I was standing next to Professor CM Lo, who is the Chair Professor and Head of Surgery of QMH.

This picture was taken during high intensity focus ultrasound for ablation of HCC as either curative intent or bridging modality prior liver transplantation. Hong Kong QMH is one of the few centres, which applied this technology for the treatment of HCC in cirrhotic liver.

The tumour was localised by specialist using the 3-dimensional high intensity focus ultrasound, prior to the ultrasonic ablation.



This picture was taken during the laparoscopic right hepatectomy. Anterior approach for the transection of the liver parenchyma was used during this laparoscopic approach.