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Interventional Radiology

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CERTIFICATE COURSE FOR MEDICAL AND HEALTH PROFESSIONALS

Course No. C165

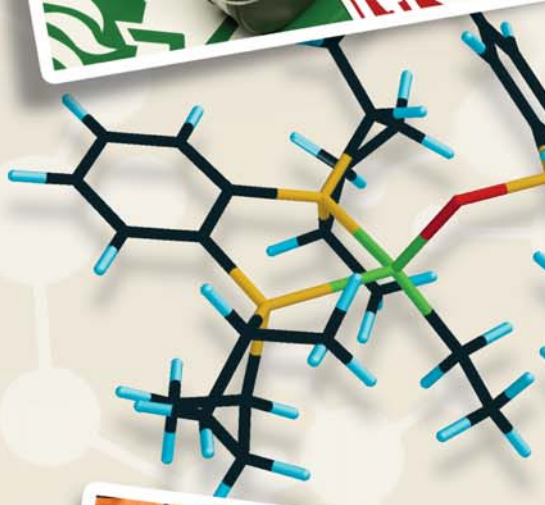
CME / CNE Course

Certificate Course on
Occupational Health & Hygiene For Healthcare Services

Jointly organised by

The Federation of Medical Societies of Hong Kong

Hong Kong Institute of Occupational and Environmental Hygiene



Objectives

The training course is intended to promote the knowledge of occupational hygiene among people working in the healthcare sectors. The basic working principles of occupational hygiene include recognition, identification, evaluation and control of hazards in the workplace environment. In a series of six topics, some common health and safety issues will be discussed. Through simple languages with illustrative examples, measures are recommended to raise the awareness and to enhance the understanding on the principles of safe work practices that can be applied during at work as well as in everyday life.

Date	Topics	Speakers
3 Aug 2010	Air quality and ventilation for the facilities	Mr. Tai-Wa TSIN
10 Aug 2010	Use of chemicals and hazard control	Mr. Mo-Tsun TO
17 Aug 2010	Microbiology for infection control	Mr. Wai-Hong TSIN
24 Aug 2010	Radiation hazards and prevention	Mr. Sung-Tat YIP
31 Aug 2010	Ergonomics – use of computer & workstation design	Mr. Tai-Wa TSIN
7 Sep 2010	Respiratory Protection Program	Mr. Mo-Tsun TO

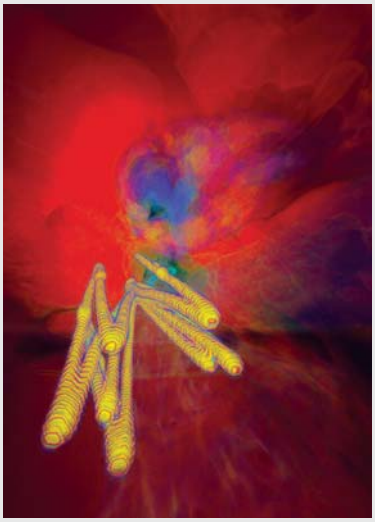
Time	7:00 p.m. – 8:30 p.m.
Venue	Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong
Language Media	Cantonese (Supplemented with English)
Course Fee	HK$750 (6 sessions)
Certificate	Awarded to participants with a minimum attendance of 70%
Enquiry	The Secretariat of The Federation of Medical Societies of Hong Kong **Tel :** 2527 8898 **Fax :** 2865 0345 **Email :** info@fmshk.org

CME / CPD Accreditation in application

A total of **9 CNE** points for the whole course and the points will be awarded according to the number of hours attended.
Application form can be downloaded from website: http://www.fmshk.org

Contents

The Cover Shot



Star War

The yellow structure as shown in this artistically rendered 3D CT scan represents the shape acquired by an inferior vena cava filter after it has been deployed within the human body. The nickname "Star War" has been given to this model for obvious reasons. The filter serves to fence off large clots that are destined to reach the heart, shown here as the colourful structure in the backdrop.

Dr. Kai-hung FUNG

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Pamela Youde Nethersole
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Editorial

Dr. Wendy WM LAM
Consultant Radiologist, Queen Mary Hospital

Editor

Dr. Wendy WM LAM

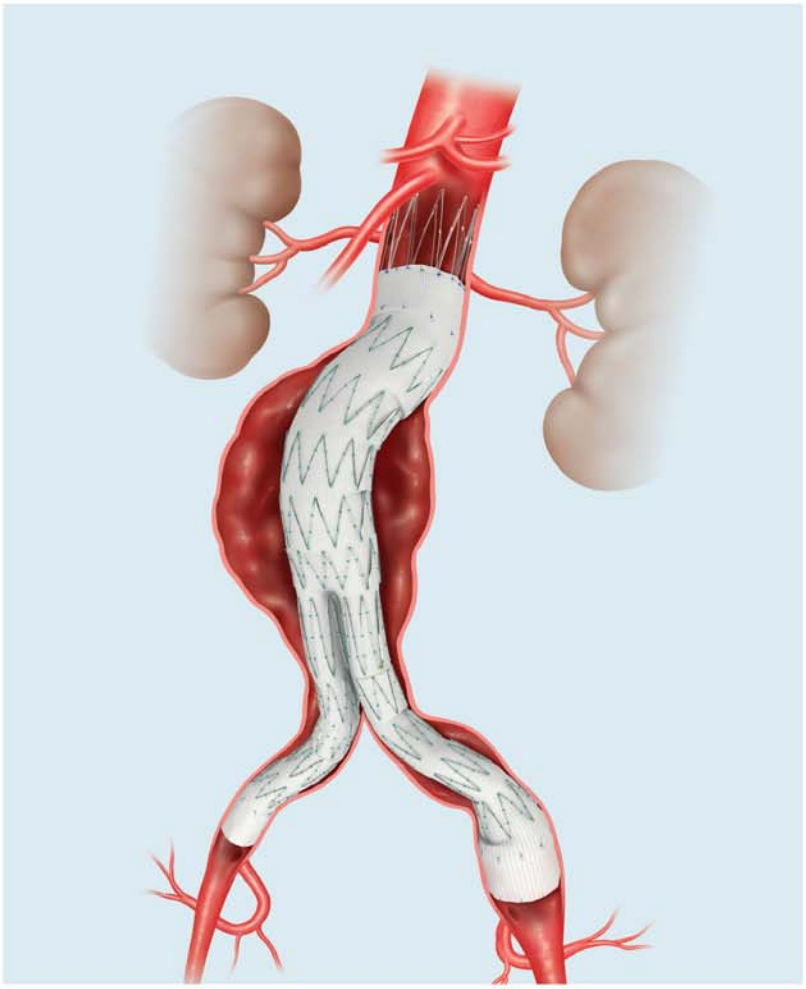
The field of Radiology has expanded greatly during the recent years largely due to the demand for Interventional Radiology. In this July issue of the Hong Kong Medical Diary, it is my great pleasure and honour to have a wonderful team of interventional radiologists to cover different interesting topics in the field. I would like to thank them for contributing updates and advances in the field.

Dr Tso's article discusses the role of interventional radiology in the management of complications in post-liver transplant recipients. Despite the success of liver transplantation in recent years based on improvements in surgical techniques and advances in immuno-suppression, various complications still occur after liver transplantation. Radiology plays an important role in the diagnosis as well as in the therapeutic treatment of these complications. Dr Simon Yu's article gives us a brief overview of vascular and interventional radiology. He will illustrate the role of vascular and interventional radiology in uterine artery embolisation for uterine fibroids, endovascular aortic repair for aortic dissections, transvenous embolisation of dural carotid cavernous fistulae, and stenting of intracranial atherosclerosis for stroke prevention.

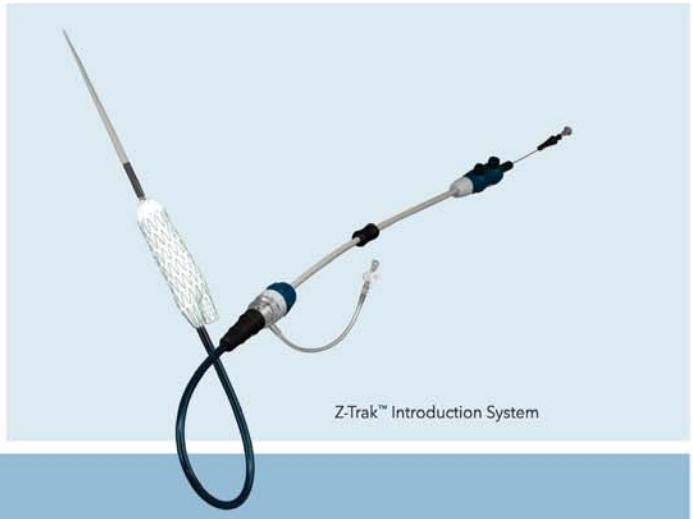
Endovascular therapy of cerebral aneurysms is emerging rapidly with new and innovative devices such as the Pipeline embolisation device. Dr Raymand Lee gives us an update on the intervention and management of cerebral aneurysms. Dr Philip Kwok's article is on the use of sclerotherapy for renal angiomyolipomata.

With the increasing use of contrast medium in CT examinations, studies had demonstrated that contrast medium was responsible for a lot of patients admitted with acute renal failure. Mr William Chui gives us a review of contrast-induced nephropathy. Last but not least, Dr Ferdinand Chu would like to share his passion for endurance sports.

I hope readers will enjoy the articles published in this July issue.



Flex Iliac Leg



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A Brief Overview of Vascular and Interventional Radiology

Prof. Simon CH YU

Department of Diagnostic Radiology & Organ Imaging, the Chinese University of Hong Kong

Prof. Simon CH YU

This article has been selected by the Editorial Board of the Hong Kong Medical Diary for participants in the CME programme of the Medical Council of Hong Kong (MCHK) to complete the following self-assessment questions in order to be awarded one CME credit under the programme upon returning the completed answer sheet to the Federation Secretariat on or before 31 July 2010.

Vascular and interventional radiology (VIR) is also called image-guided minimally-invasive therapy, a procedure-based therapeutic subspecialty of modern medicine. With the invention of devices and treatment procedures such as angioplasty and the catheter-delivered stent, the pioneers of VIR have seen the development of the subspecialty in clinical application at an amazingly rapid pace in the last couple of decades.

Interventional radiologists are medical specialists who are well trained in state-of-the-art medical imaging and diagnosis, in clinical experience across multiple medical specialties, as well as in-depth knowledge and skills of VIR treatment procedures. They are fully equipped for partnership in the treatment and clinical management of patients for a wide variety of disease conditions on a multi-disciplinary basis.

With advancement in technology and knowledge, endovascular procedures of VIR have been found to be a less invasive treatment option alternative to open surgery in some disease conditions and the only viable treatment option in the others. Due to the scope of this article, the following conditions are selected to illustrate the role of VIR: 1) uterine artery embolisation for uterine fibroids, 2) endovascular aortic repair for aortic dissections, 3) Transvenous embolisation of dural carotid cavernous fistulae, and 4) stenting of intracranial atherosclerosis for stroke prevention.

Uterine Artery Embolisation for Uterine Fibroids

Uterine fibroids can cause considerable symptoms, most frequently menorrhagia, dysmenorrhoea, pelvic pain and pressure, dyspareunia, urinary frequency and urgency, which are often of sufficient severity to necessitate surgical intervention. Up to 300,000 hysterectomies are performed each year in the United States for fibroid removal. Uterine fibroid embolisation is a non-surgical means of active intervention for symptomatic fibroids. The percutaneous endovascular procedure involves catheterisation of uterine arteries and embolisation with microspheres to aim at occlusion of the peri-fibroid vessels and ischaemic infarction of the fibroids. The treated fibroids shrink over the course of several months to years. In general, a successfully treated fibroid will be permanently devascularised. Pathological studies of uteri after embolisation typically show hyaline necrosis or coagulative necrosis of the tumour mass. However, incompletely infarcted fibroids may increase in size again, new fibroids may also develop over time. It has been shown in a number of large-scale observational studies that symptoms of fibroids such as menorrhagia, pelvic pain, pressure, and urinary symptoms are improved in 85 to 95% of patients. The American College of Obstetricians and Gynecologists (ACOG) concludes "based on good and consistent evidence (level A), uterine artery embolisation is a safe and effective option for appropriately selected women who wish to retain their uteri. The Society of Interventional Radiology and the Cardiovascular and Interventional Radiological Society of Europe state that uterine artery embolisation is indicated for the presence of uterine leiomyomata that are causing significant lifestyle-altering symptoms, specifically mass effects on the bladder or intestines, and/or dysfunctional uterine bleeding that is prolonged, associated with severe dysmenorrhoea, or is causing severe anaemia.

Endovascular Aortic Repair for Aortic Dissections

Acute aortic dissection is one of the most catastrophic diseases that can affect the aorta. There are 10 to 20 cases per million population per year, and if the condition is left untreated, 36 to 72 percent of patients die within 48 hours of diagnosis, and 62 to 91 percent die within one week. For patients with acute Stanford type A dissections (which involve the ascending aorta), surgical intervention is performed immediately after diagnosis to avert the high risk of death due to various complications, including cardiac tamponade, aortic regurgitation, and myocardial infarction. In contrast, the preferred treatment for most patients with Stanford type B dissections (which do not involve the ascending aorta) is medical therapy, including the use of antihypertensive drugs and beta-blockers. Indications for intervention in acute type B dissections include persistent back or chest pain, pseudoaneurysm >4 cm in diameter, uncontrolled hypertension, distal malperfusion with end organ ischaemia, localised false aneurysm, cardiac and coronary complications resulting from proximal extension of the dissection, progression of dissection and impending rupture. The current mortality rate among patients who receive medical

therapy for type B dissections remains about 20 percent, whereas the mortality rates among patients who undergo surgical repair of acute type A and B dissections are currently about 29 percent and 35 percent respectively. However, for acute disease complicated by end-organ ischaemia, the surgical mortality rate exceeds 50 percent. Among patients with acute type B aortic dissections, more than 60 percent of associated deaths are due to local rupture, usually of the false lumen. Surgical therapy usually consists of limited replacement of the descending aorta at the level of the initial entry tear; the flow into the false lumen is obliterated by circumferential reapposition of the dissected septum to the aortic wall at the distal graft anastomosis. The rationale for surgical therapy is to obviate the most frequent cause of death. Current clinical evidence suggests that stent-graft placement over the primary entry tear in patients with acute type B dissections may be an alternative to open surgery. The result is similar to surgical obliteration of the entry tear because it can exclude the flow through the initial tear in the intima and redirect aortic blood flow exclusively into the true lumen. In addition to promptly averting serious end-organ ischaemia or infarction, stent-graft placement over the intimal tear can prevent the eventual formation of an aneurysm by facilitating complete thrombosis of the thoracic aortic false lumen. Even if only partial thrombosis of the false lumen is achieved, it still can be advantageous: it may protect the false lumen from enlarging over time, since systemic blood pressure is no longer directly transmitted from the aorta through a large primary tear in the intima. Following endovascular stenting the false lumen is thrombosed completely in the portion of the aorta covered by the stent-graft in over 88% of patients by the end of first year, with 60% having thrombosed the entire length of dissection. Complete regression of the false lumen following endovascular stenting occurs in 58% of cases. These figures suggest that a significant minority would have a patent false lumen, which is related to the retrograde filling from the true lumen at the site of distal tear. The combined data from EUROSTAR and United Kingdom Thoracic Endograft registries reported a high technical success rate of 88.6% for endovascular stenting. The complication rates remained low with a reported incidence of paraplegia and stroke at 0.8 and 1.5% respectively.

Transvenous Embolisation of Dural Carotid Cavernous Fistulae

Dural carotid-cavernous fistula (DCCF) is a specific type of dural arteriovenous fistulae characterised by abnormal arteriovenous shunting within the cavernous sinus. Approximately 25% of DCCF occur spontaneously, especially in middle-aged to elderly women, and may be associated with atherosclerosis, systemic hypertension, collagen vascular disease, pregnancy, connective tissue disorders, and minor trauma. DCCF presents commonly with ocular symptoms such as proptosis, chemosis, diplopia in 80% of cases, and loss of visual acuity is also a common symptom. When the visual loss becomes severe, it rarely improves even if the fistulae are obliterated. Patients with visual deterioration therefore require early intervention and they constitute 26% of all. In patients with high-risk DCCF such as those presenting with retrograde filling of cortical veins, neurologic deficits, worsening ocular symptoms, or significant atherosclerosis of the carotid bifurcation, transvenous embolisation of the cavernous sinus with embolisation coils is the treatment of choice. Direct surgical exposure and obliteration of DCCF requires craniotomy and it is rarely indicated due to the high success rate of transvenous embolisation. Transvenous embolisation is a highly efficient and safe treatment in symptomatic carotid-cavernous fistulae. In a majority of patients, a significant and permanent improvement in clinical signs and symptoms can be achieved. The overall technical success rate of transvenous embolisation of DCCF is 81 to 86%. Residual symptoms may occur in up to 11% of patients. Transient VIth cranial nerve palsy may occur in 2% after transvenous embolisation for a period of 1 to 2 months. There is a tendency for ocular pressure-related symptoms and visual impairment to resolve rapidly within the first 2 weeks after endovascular treatment, while cranial nerve palsy and diplopia improve slowly (65%) or do not change (11%). There is usually no recurrence.

Stenting of Intracranial Atherosclerosis for Stroke Prevention

Intracranial atherosclerotic stenosis is responsible for approximately 33% of acute ischaemic strokes in Asian populations. The annual stroke risk from all causes in patients with intracranial atherosclerosis is estimated to be from at least 3.6% to more than 13% annually with the definitive National Institutes of Health (NIH) study demonstrating a first year ischaemic stroke rate in the pertinent vascular territory of at least 11%. The multi-centre, randomised, double-blind NIH -sponsored Warfarin-Aspirin Symptomatic Intracranial Disease Trial [WASID]) performed from 1998 to 2003 showed that patients with transient ischaemic attacks or minor strokes caused by an angiographically verified stenosis of >50% of a major intracranial artery and with no other apparent aetiology were associated with ischaemic strokes in the same vascular territory in one year at the rate of 12% and 11% when treated with aspirin and warfarin respectively. In the mean follow-up period of 1.8 years, ischaemic or haemorrhagic strokes or vascular deaths occurred in 22.1% in the aspirin group versus 21.8% in the warfarin group. There is therefore currently no approved surgical option for the patient population with intracranial arterial stenosis. The device and techniques of angioplasty and stenting procedure for intracranial atherosclerotic stenosis using nitinol stent has been improving. Major peri-procedure complication rates of such procedures as represented by stroke or death rates at 30 days in these studies varied from 4.5% to 9.6%. The American Society of Interventional and Therapeutic Neuroradiology, Society of Interventional Radiology, and American Society of Neuroradiology have concurred that sufficient evidence now exists to recommend that intracranial angioplasty with or without stenting should be offered to symptomatic patients with intracranial stenoses who have failed medical therapy.

MCHK CME Programme Self-assessment Questions

Please read the article entitled "A Brief Overview of Vascular and Interventional Radiology" by Prof. Simon CH YU and complete the following self-assessment questions. Participants in the MCHK CME Programme will be awarded 1 CME credit under the Programme for returning completed answer sheets via fax (2865 0345) or by mail to the Federation Secretariat on or before 31 July 2010. Answers to questions will be provided in the next issue of The Hong Kong Medical Diary.

Questions 1-10: Please answer T (true) or F (false)

1. In uterine fibroid embolisation, a successfully treated fibroid will not be permanently devascularised.
2. Uterine artery embolisation is indicated for the presence of uterine leiomyomata that are causing significant lifestyle-altering symptoms.
3. The preferred treatment for most patients with Stanford type A dissections is medical therapy, including the use of antihypertensive drugs and beta-blockers.
4. Stent-graft placement over the primary entry tear in patients with acute type B dissections may be an alternative to open surgery and the result is similar to surgery.
5. Complete regression of the false lumen following endovascular stenting occurs in 58% of cases.
6. A significant and permanent improvement in clinical signs and symptoms can be achieved in transvenous embolisation of symptomatic carotid-cavernous fistulae.
7. Transient VIth cranial nerve palsy may occur in 2% after transvenous embolisation for a period of 1 to 2 months.
8. There is usually a high chance of recurrence after transvenous embolisation of symptomatic carotid-cavernous fistulae.
9. Intracranial atherosclerotic stenosis is responsible for approximately 33% of acute ischaemic strokes in Asian populations.
10. It is recommend that intracranial angioplasty with or without stenting should be offered to symptomatic patients with intracranial stenoses who have failed medical therapy.

ANSWER SHEET FOR JULY 2010

Please return the completed answer sheet to the Federation Secretariat on or before 31 July 2010 for documentation. 1 CME point will be awarded for answering the MCHK CME programme (for non-specialists) self-assessment questions.

A Brief Overview of Vascular and Interventional Radiology

Prof. Simon CH YU

Department of Diagnostic Radiology & Organ Imaging, the Chinese University of Hong Kong

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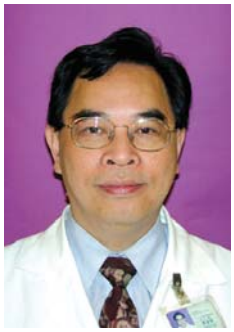
Contact Tel No.:_____ DCHK No.: _____

Answers to June 2010 Issue

An Update on HDL Management

1. F 2. T 3. F 4. F 5. T 6. T 7. T 8. F 9. F 10. T

Interventional Radiology in the Management of Complications in Liver Transplant Recipients



Dr. WK TSO

Chief of Service, Department of Radiology, Queen Mary Hospital

Dr. WK TSO

Liver transplantation (LT) is a well established surgical treatment option for patients with end stage liver diseases, with high operative success rates and survival benefits in both deceased donor and living donor liver transplantation (LDLT). The QMH liver transplant programme is the largest of its kind in China and Southeast Asia. By the end of October 2008, a total of 659 liver transplants have been performed with a 1-year, 3-year and 5-year survival rates of 92%, 87% and 84% respectively. To ensure proper functioning of the liver graft, both arterial perfusion and venous drainage have to be sufficient and biliary ducts should not be obstructed. Vascular and biliary anastomosis must be patent without stenosis or leakage. Despite the success of liver transplantation in recent years based on improvements in surgical techniques and advances in immunosuppression, various complications still occur after liver transplantation[1,2,3], resulting in significant patient mortality and morbidity. These complications may be categorised into vascular and biliary related groups. Radiology plays an important role in the diagnosis as well as in the therapeutic treatment of these complications[4,5,6]. This article describes how interventional radiology could be applied in the management of postoperative vascular and biliary complications in recipients after liver transplantation.

Management of Vascular Complications

Vascular complications following liver transplantation occur with an incidence of 5 to 25% and may involve the hepatic artery, portal vein, hepatic vein or inferior vena cava[7]. Colour Doppler ultrasound (US) is used as the main screening technique, while angiography is reserved for confirming US findings or when US findings are equivocal. Excellent results have been reported using multislice computed tomography angiography (CTA) in detecting vascular complications after liver transplantation[8]. Contrast magnetic resonance angiography (MRA) is another alternative non-invasive technique for this purpose[9].

Hepatic Artery Thrombosis

Hepatic artery thrombosis is a serious and the most common vascular complication of liver transplantation. Early thrombosis is often catastrophic. Patients present with cholangitis, septic shock or fulminant liver failure. The diagnosis is established when colour Doppler US fails to identify both an arterial colour Doppler signal and waveform along the anticipated course of the hepatic artery. Preferred treatment is surgical thrombectomy with revision of the surgical anastomosis. However, most patients require retransplantation. Successful cases of transcatheter thrombolysis in early hepatic artery thrombosis (Fig. 1) have been reported but carry a high risk of intraabdominal haemorrhage during the very early post-operative period[10]. Chronic occlusion of the hepatic artery takes a more benign course and ends up with biliary complications such as biliary strictures, occlusions, and bilomas. Patients will require retransplantation if the biliary complications from chronic hepatic artery occlusion become too severe.

Figure 1. Hepatic artery thrombosis after LDLT.

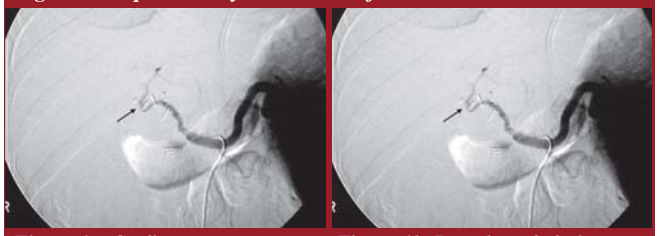


Figure 1a. Coeliac artery angiogram shows occlusion of transplanted hepatic artery (arrow).

Figure 1b. Post-thrombolysis angiogram demonstrates reconstitution of the hepatic artery (arrow).

Figure 2. Hepatic artery stenosis after LDLT.

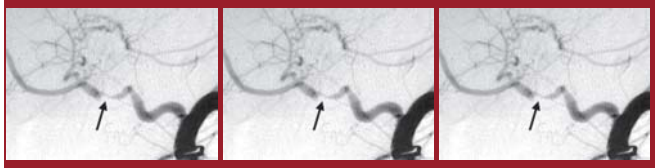


Figure 2a. Coeliac artery angiogram shows hepatic artery stenosis (arrow).

Figure 2b. Balloon angioplasty of hepatic artery stenosis (arrow).

Figure 2c. Post-angioplasty coeliac artery angiogram reveals good patency of hepatic artery (arrow).

Hepatic Artery Stenosis

Patients with hepatic artery stenosis usually present with elevated liver function tests or a liver biopsy demonstrating ischaemic changes. Arterial stenosis is detected with colour Doppler US, with findings of peak systolic velocities greater than 200cm/sec or a focal increase in velocity of greater than three-fold suggesting a stenosis of greater than 50%. Balloon angioplasty is the accepted treatment for hepatic artery stenosis (Fig. 2). Stent placement is usually reserved for arterial dissections related to angioplasty or recurrent stenosis. The procedure is typically performed by placing a 6F- or 7F guide catheter into the coeliac artery and crossing the stenotic lesion using a 0.014- or 0.018-inch guide wire balloon stent system. The largest series by Oron and coworkers described angioplasty in 21 allografts and reported a technical success rate of 81%[11]. Percutaneous transluminal angioplasty has been reported to be an effective treatment of hepatic artery stenosis after LDLT,

with a success rate of 94% and a complication rate of 6%, with possible recurrence in 33% of patients [12].

Portal Vein Stenosis

Patients with portal vein stenosis present months to years after transplantation with symptoms of portal hypertension including variceal bleeding and ascites. Portal vein stenosis is diagnosed with US, CTA or MRA. If treatment is contemplated, further imaging using indirect arterial portography or direct portovenography can provide a better assessment of the stenotic lesion. Portal vein stenosis is treated from a percutaneous transhepatic approach with angioplasty and selective stent placement (Fig. 3). Success rates of over 70% have been reported [13].

Figure 3. Portal vein stenosis after LDLT.

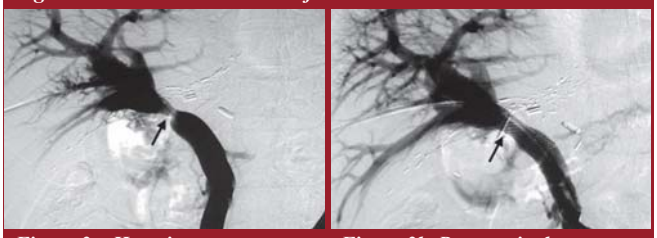


Figure 3a. Hepatic portovenogram demonsrates portal vein stenosis (arrow).

Figure 3b. Post-angioplasty portovenogram shows satisfactory result (arrow).

Hepatic Vein Stenosis

Patients with hepatic vein stenosis present clinically with elevated liver enzymes, or Budd-Chiari Symdrome. Hepatic vein stenosis is most common in segmental liver transplants occurring in 4 to 7 % of recipients [14]. Diagnosis is usually with Doppler ultrasound, CTA or MRA; with hepatic venography reserved for selected cases. Treatment is typically from transjugular or transfemoral approach with balloon dilatation or stent placement across the stenosis (Fig. 4).

Figure 4. Hepatic vein stenosis after LDLT.

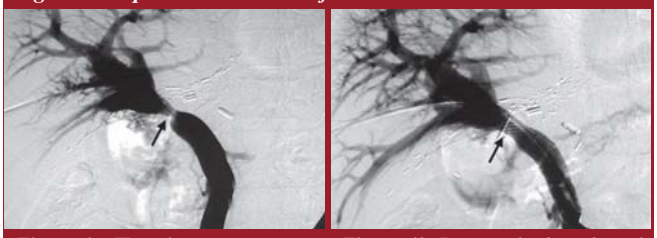


Figure 4a. Hepatic venogram shows hepatic vein stenosis (arrow).

Figure 4b. Post-angioplasty hepatic venogram demonstrates good result (arrow).

Inferior Vena Cava Stenosis

Patients with inferior vena cava stenosis typically present with lower extremity oedema or ascites. Early stenosis is usually due to technical factors at the surgical anastomosis, which may cause kinking or torsion of the inferior vena cava. Late stenosis is due to fibrosis or intimal hyperplasia at the anastomotic site. Diagnosis is with ultrasound, CTA or MRA. Treatment is from transugular or transfemoral approach with balloon angioplasty and stent placement (Fig. 5). Weeks and coworkers published a large series of percutaneous angioplasty and stent insertion for IVC stenosis in 9 transplant recipients and found the procedure to be safe and effective in these patients [15].

In cases of venous outflow obstruction resulting from hepatic vein and/or IVC lesions after paediatric liver transplantation, percutaneous endovascular treatment after balloon dilatation or stent placement has been found to be a safe and effective alternative treatment that results in long term patency [16].

Figure 5. IVC stenosis after deceased donor LT.

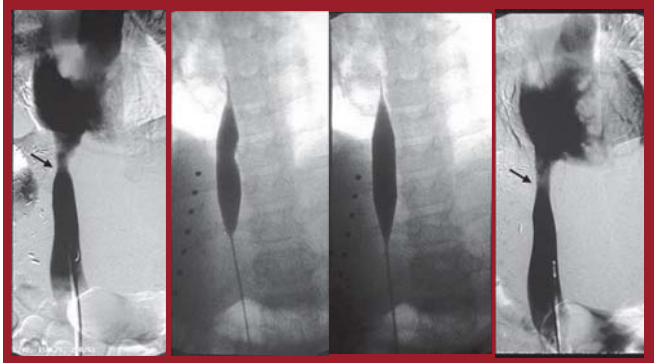


Figure 5a. IVC venogram shows stenosis at anastomosis (arrow).

Figure 5b-c. Balloon angioplasty of IVC stenosis (arrow).

Figure 5d. Post-angioplasty IVC venogram demonstrates satisfactory result (arrow).

Figure 6. Biliary enteric anastomotic stricture after LDLT.

Figure 6a. Cholangiogram shows biliary duct dilatation and tight stricture at biliary enteric anastomsis (arrow) with poor contrast opacification of the bowel loop.

Figure 6b. Balloon angioplasty of biliary enteric anastomotic stricture (arrow).

Figure 6b. Balloon angioplasty of biliary enteric anastomotic stricture (arrow).

Figure 6d. Post-angioplasty cholangiogram demonstrates satisfactory result with free passage of contrast into the small bowel loop.

Management of Biliary Complications

Bile duct complications have been described in 15% to 25% of liver transplant patients[17] and include strictures, bile leaks, stone or sludge and dysfunction of sphincter of Oddi. Ductal dilatation due to biliary stricture is easily detected with ultrasound. Percutaneous transhepatic cholangiography or endoscopic retrograde cholangiography is used to diagnose biliary stricture and bile leak. Magnetic resonance cholangiography has been found to be a reliable technique for detecting post-orthotopic liver transplanatation biliary complications[18]. Bile duct stricture, either anastomotic or non-anastomotic, is the most common cause of biliary obstruction. Anastomotic strictures usually result from fibrosis or scarring, whereas non-anastomotic strictures may be related to cold ischaemia. Treatment is often by percutaneous transhepatic biliary drainage and balloon dilatation of the stricture (Fig. 6) or endoscopic dilatation with temporary stenting, while surgery is

reserved for recurrent strictures or those not responding to the less invasive measures. Long term patency of percutaneous bilioplasty in adult liver transplant recipients is reported to be about 50% at 5 year [19].

Image guided aspiration or drainage is often employed in the management of bile leakage occurring in liver transplant recipients. Bilomas can be aspirated under US guidance to confirm the diagnosis and to promote healing and preserve graft integrity. Should direct cholangiography demonstrates a bile leak then anastomotic stenting may be performed if the integrity of the hepatic artery has been established.

Conclusion

With advances in interventional radiological techniques, the interventional radiologist has become an essential member of the liver transplant team. Despite continuous improvements in surgical techniques resulting in a progressive decline in postoperative complications, vascular and biliary complications remain a significant cause of morbidity and mortality of the liver transplant patients. The judicious use of interventional radiological procedures is invaluable in the management of complications after liver transplantation.

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Intervention of Cerebral Aneurysms: An Update

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Dr. Raymand LEE

Modern endovascular treatment of cerebral aneurysms has rapidly evolved since the introduction of the Guglielmi detachable coil (Boston Scientific/Target, Fremont, CA) in 1992.

The International Subarachnoid Aneurysm Trial (ISAT)[1] posed to be a landmark study in the development of endovascular coiling for cerebral aneurysms. It was a multi-centre prospective randomised trial comparing the results of endovascular coiling verses clipping in patients with ruptured cerebral aneurysms. 2143 patients with ruptured intracranial aneurysms were enrolled in 43 European centres. They were randomly assigned to neurosurgical clipping or endovascular coiling. It showed a 23.9% relative reduction in the risk of death and dependency at 1 year in the coiling group as compared with the clipping group. There was an absolute risk reduction of 7.4% (p=0.0001), favouring endovascular coiling.

Follow-up data from the ISAT showed that the risk of rebleeding from a treated cerebral aneurysm was low[2]. There were slightly more rebleeds from the endovascular treated group as compared with the neurosurgical clipped group. There was no difference in the number of deaths related to rebleeding in both groups. Risk of death at 5 years was significantly lower in the endovascular coiled group, while the probability of independent survival at 5 years was the same in the two groups.

The American Heart Association guideline suggested that for patients with ruptured cerebral aneurysms judged by an experienced team of cerebrovascular surgeons and endovascular interventionists to be technically amenable to both endovascular coiling and neurosurgical clipping, endovascular coiling can be beneficial (Class I,Level of Evidence B)[3]. However, it would be reasonable to consider individual characteristics of the patient and the aneurysm in deciding the best means of repair.

The introduction of the Pipeline embolisation device (PED; Chestnut Medical, Menlo Park, CA) marked a new page in the endovascular treatment of cerebral aneurysm. PED is a self-expanding microcatheter-delivered flow diversion device. It consists of a braided cylindrical meshwork. PED-1, the first generation of the device, was constructed with a 32-strand braiding machine. PED-2, the second generation of the device was constructed with a 48-strand braiding device composed of platinum and cobalt chromium microfilaments. The device aims at diverting flow away from the cerebral saccular aneurysm. On the other hand, it is intended to be porous enough to preserve the patency of any vessel branch covered by the construct.

The PED-2 is attached to a flexible delivery wire and is packaged in an introducer sheath, which can be loaded into standard microcatheters with 0.027-inch inner diameter or greater. Upon bringing the microcatheter to the desired position, the PED device could be deployed by a combination of microcatheter withdrawal together with forward pressure on the delivery wire.

53% complete aneurismal occlusion was achieved with single PED-1 deployment in aneurysms created in female New Zealand white rabbits. New intimal growth across the neck of the aneurysms was seen upon harvesting the aneurysms at 6 months[4]. Complete occlusion rate was raised to 94% with PED-2 deployment in similar rabbit aneurysm models. No incident of branch artery occlusion was observed. There was no distal embolic events in the downstream of the parent artery[5]. Parent artery neointimal hyperplasia was minimal in most of the cases and was significantly less in PED-2. The first human reported case of PED implantation was published in 2008[6].

The introduction of PED marked a change in the concept in the treatment of saccular cerebral aneurysms. The usual practice is the placement of detachable coils into the aneurismal sac to promote thrombosis of the aneurysm, thereby excluding the aneurysm from the cerebral circulation. Neuroform stent (Target Therapeutics, Fremont, CA) placement would be necessary with the endosaccular approach in dealing with wide neck cerebral aneurysms to prevent herniation of the coils back into the parent artery.

Endoluminal reconstruction of the parent artery would be the concept in the PED deployment. Flow diversion from the cerebral aneurysm and the subsequent intimal growth across the aneurysm neck exclude the cerebral aneurysm from the circulation. The parent artery could be reconstructed with the PED even with aneurismal incorporation of part of the parent artery or a fusiform type of cerebral aneurysm. The latter was difficult to treat even with stent-assisted coiling. Besides, the procedure is technically simpler as compared with stent-assisted coiling.

Various groups have published their experience with the PED. The Argentina group headed by Professor Lylyk had treated 53 patients with 72 PEDs for the treatment of 63 intracranial aneurysms. The rate of complete occlusion of the aneurysm on follow-up digital subtraction angiography was 53% at 3 months, 93% at 6 months and 95% at 12 months in their study[7].

Unruptured cerebral aneurysms, reconstituted cerebral aneurysms after previous coiling, giant cerebral aneurysm and fusiform aneurysms would be some of the indications for the use of PED.

In conclusion, endovascular therapy of cerebral aneurysms is emerging rapidly with new and innovative devices. The introduction of PED has changed the idea of endosaccular approach of aneurysm occlusion to the new endoluminal parent artery reconstruction concept.

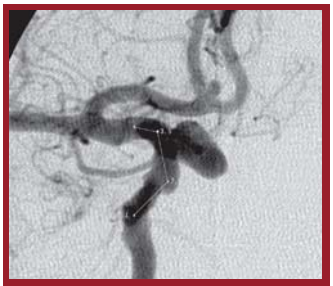

Figure 1. Pre-stenting digital subtraction angiography (DSA) of right internal cerebral artery (ICA) showing a 1cm medial pointing ophthalmic segment aneurysm. Incidental finding of another 3mm anterior communicating artery aneurysm

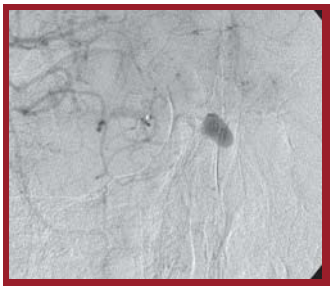

Figure 2. Immediate post-stenting DSA showing moderate stasis of contrast in the ICA aneurysm

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A new DCH Syllabus has been introduced since November 2009. It will serve as the basis for assessments for the DCH Clinical Examination to be held in Hong Kong in November 2010. The new Syllabus is available for viewing at the following link on the RCPCH Website:
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Interventional Radiological Treatment of Renal Angiomyolipoma

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Dr. Philip CH KWOK

Renal angiomyolipoma (AML) is a benign tumour in the kidney. It can occur sporadically, or it can be part of the tuberous sclerosis complex (TSC). It is identified increasingly due to increased use of medical imaging and advances in imaging technology. It contains fat and vascular components, occasionally small aneurysms are present. The fatty component is characteristic of AML and if fat is identified, its benignity can be established (fig 1a). In ultrasound, it appears as a well-defined echogenic lesion. The diagnosis can be more firmly established when fatty tissue is seen in CT, which appears as hypodense tissue with negative CT number. If fatty tissue is scanty, in-phase and out-phase T1-weighted sequences in MRI can be used to identify the fatty tissue[1].

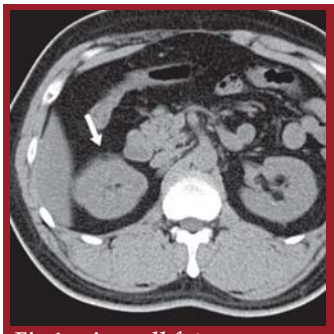

Fig 1a: A small fat-containing renal angiomyolipoma (arrow).

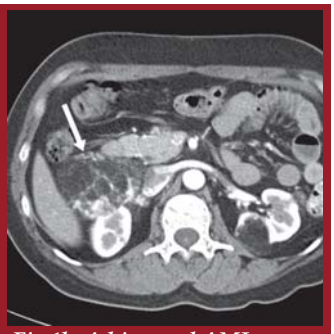

Fig 1b: A big renal AML contains fat and vascular components (arrow).

In sporadic AML, the number of AML is scanty. The lesion size usually remains static for a long time or it can grow slowly. In AML of TSC, it may grow faster, it is usually identified in adolescents and young adults. It has also been found in a child as young as 5 years old[2,3].

The lesion usually remains asymptomatic and is usually identified incidentally, when medical imaging is performed for other causes. Another major mode of presentation is spontaneous rupture of the tumour (fig 2). The patient will have severe loin pain or back pain, drop in haematocrit and even hypovolaemic shock. The rupture is related to the aneurysms and vascular components. It can occur spontaneously, in patients on anticoagulants, or in patients with trauma to the loin. Rupture has also been reported during pregnancy or in the post-partum period.[4-8]

Due to its benign nature, the treatment is usually conservative, especially when it is small and asymptomatic. 4cm is chosen in several series as the size to initiate treatment.

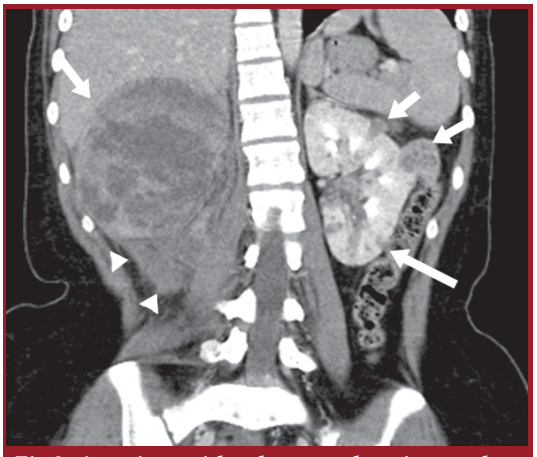

Fig 2: A patient with tuberous sclerosis complex. She has multiple renal AMLs (arrows). One of them bleeds into the retroperitoneal space (arrowhead) and causes severe right loin pain.

The treatment can be surgical treatment, interventional radiological (IR) treatment or a combination of these.

IR treatment is usually chosen when there is spontaneous rupture. Transarterial embolisation with particulate agents is usually used. Polyvinyl alcohol (PVA) particles or tris-acryl gelatin spherical particles are usually used. The bleeding segmental artery or arteries are identified with a CT angiogram before the procedure. CT is usually performed to indentify the bleeding cause and source of bleeding. Arterial phase is usually included in the study and the data can be used to construct a set of CT angiogram.[9] Catheter angiogram is then performed before IR to identify the more distal branches and to confirm the bleeding segmental artery. The bleeding artery is then selectively catheterised with a 4Fr or 5Fr catheter, a smaller coaxial catheter may be used to reach the most distal arteries. Particles are then injected to block the bleeding artery.

Besides particles, liquid agents can also be used. The commonest agent is a mixture of absolute alcohol mixed with an only contrast, lipiodol, usually in the ratio of 2:1. This agent serves as an embolic agent as well as a sclerosing agent. The artery is sclerosed and further bleeding is prevented. The tumour can then be shrunken down by two-thirds to 40%[10].

Transarterial embolisation is not only used during rupture, it can also be used in elective situation. It is usually performed when the tumour is bigger than 4cm, or when enlarged vessels or aneurysms are identified, which can be the source of bleeding[11].

The effect of transarterial embolisation with particles is good and it preserves renal functions. Different series have shown that it will prevent further bleeding.[12,13] Similar results are shown in transarterial sclerotherapy of the tumour.

Complications of transarterial embolisation and sclerotherapy are rare; non-target embolisation to other renal substance can damage some normal nephrons. Sometimes, this cannot be avoided as the supplying artery to the renal AML may be too small and superselective embolisation is not possible. Other rarer complications include renal abscess formation, tumour necrosis leading to lipiduria, pulmonary oedema after alcohol/lipiodol sclerotherapy[11,14-16]. In a case report, embolisation with PVA particles alone may predispose to acute haemorrhage during or after embolisation[17].

After embolisation, the tumour does not disappear. The tumour size usually decreases by two-thirds to 40%. Recurrence of the tumour has been reported and repeated embolisations are occasionally needed, especially in patients with TSC[18,19]. Thus, more aggressive IR treatments are occasionally used. Radiofrequency ablation of renal tumours has been proven as a useful nonsurgical treatment for small renal tumours. A radiofrequency probe or needle is inserted into the tumour and thermal energy is used to ablate the tumour[20]. The most worrisome complication is thermal injury to the pelvicalyceal system and ureter. This complication can be severe for treatment of a benign tumour.

More recently, cryoablation has been used for ablation of renal tumours[21]. The needles are small and they can be inserted safety into the tumour. Compressed helium and argon gas are used to include deep cooling surrounding the needle. The cells die when the temperature is below -40°XC. The merit of this treatment is that it is less painful and the iceball can be monitored under CT or even MR. The size of ablation can be maintained accurately and injury to the collecting system is avoided.

In conclusion, IR plays a major role in the treatment of renal AML. Treatment is not always needed in small tumours. In tumour ruptures, urgent transarterial embolisation can save the life of patients.

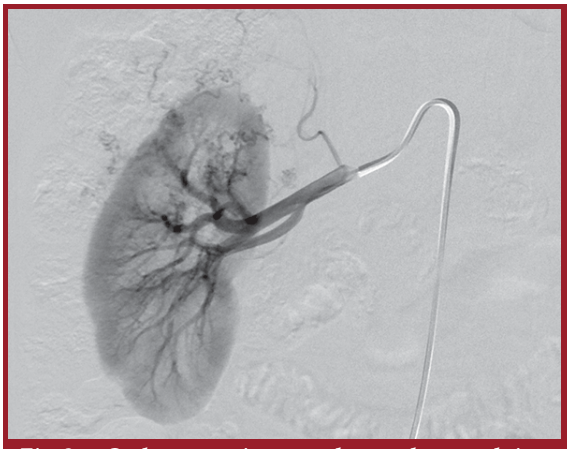

Fig 3a: Catheter angiogram shows the supplying artery to the AML in the upper pole of the right kidney. This is the patient of fig 1a.

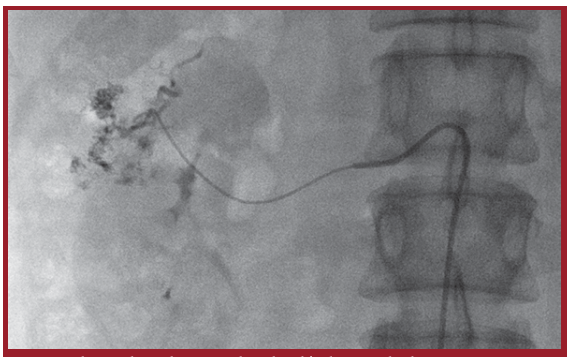

Fig 3b: Absolute alcohol/ lipiodol mixture is injected into one of the supplying arteries via a coaxial catheter through the original catheter.

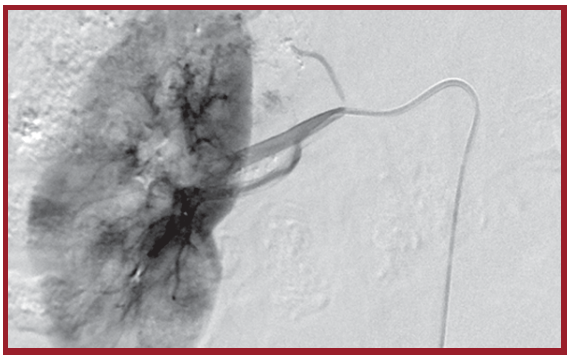

Fig 3c: Completion angiogram shows decreased tumour blood supply to the AML.

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Contrast-induced Nephropathy

William CM CHUI

Chief of Pharmacy Service, Hong Kong West Cluster, Hospital Authority
Honorary Associate Professor, Department of Pharmacology and Pharmacy, LKS Faculty of Medicine, HKU

Contrast-induced nephropathy (CIN) is usually defined by a fixed (0.5 mg/dL or 44 μgmol/L) or a proportionate (25%) rise in serum creatinine (SCr) levels after contrast exposure. Prospective studies of patients admitted with acute renal failure (ARF) demonstrated that contrast medium was responsible in 14.5% of cases.[1] The mechanism through which nephropathy is induced by contrast is not completely known. Some studies showed evidence of ischaemic acute tubular necrosis. Major theories are renal vasoconstriction resulting in medullary hypoxaemia, possibly mediated by alterations in nitric oxide, endothelin and/or adenosine, and direct cytotoxic effects of the contrast agents. Free radical-induced renal ischaemia may also be involved in the process. Once identified, treatment of CIN is mainly supportive, consisting mainly of careful fluid and electrolyte management.

Risk Assessment

Risk factors for CIN include hypotension (systolic blood pressure < 80 mmHg for at least 1 hour requiring inotropic support or intra-aortic balloon pump (IABP) within 24 hours periprocedural), use of IABP, chronic heart failure (NYHA class III/IV and/or history of pulmonary oedema), age > 75 years, anaemia (haematocrit < 39% for men or < 36% for women, diabetes mellitus, contrast volume, and kidney disease.[2] Other risk factors for CIN include nephrotoxic drugs, liver cirrhosis, hypoalbuminaemia, and multiple myeloma.

General Measures

Potentially nephrotoxic drugs, including but not limited to: ACE inhibitors, angiotensin receptor antagonists, diuretics, NSAIDs/COX-2 inhibitors and metformin should be discontinued 1 day before and 1 day after contrast. Some advocate that metformin should be withheld for 48 hours before the administration of contrast medium and until it is certain that CIN has not occurred, due to the risk of developing lactic acidosis under possible ARF. Patients should be pre-hydrated with normal saline 1ml/kg/hour (0.5ml/kg/hour for patients with left ventricular ejection fraction < 40%) for at least 12 hours before imaging, till up to 12-25 hours post procedure.[3]

The volume of contrast should be minimised to reduce the chance of CIN. Non-ionic low-osmolar contrast (e.g. iohexol) may cause fewer ARF than ionic high-osmolar contrast (e.g. diatrizoate), but is more expensive. Pharmacoeconomic data have shown that a high risk for development of CIN may be considered as one of the indications for the use of low-osmolar or iso-osmolar contrast as it may be more cost effective, whereas in patients with normal renal function and no risk factors present, no advantage over the traditional ionic high-osmolar contrast has been shown.

N-acetylcysteine

N-acetylcysteine (NAC) is a scavenger of oxygen free radicals and a glutathione precursor capable of replenishing depleted intracellular glutathione, and in theory augments antioxidant defences.

Intravenous and oral NAC prevented CIN in patients with normal baseline renal function undergoing primary angioplasty secondary to acute myocardial infarction with a dose-dependent effect in patients treated with primary angioplasty and improved hospital outcome in a study.[4] Another randomised, 2-centre, double-blind study in patients with chronic kidney diseases, volume supplementation by sodium bicarbonate plus NAC was superior to the combination of normal saline with NAC alone or with the addition of ascorbic acid in CIN in patients at medium to high risk[5]. Nevertheless, a meta-analysis of 13 randomised, placebo-controlled clinical trials did not find convincing evidence that NAC protects against CIN in patients with baseline renal insufficiency.[6]

In summary, as a strategy to prevent CIN, NAC is well tolerated with very limited side effects. It is inexpensive and easy to administer in oral form, and has been advocated to reduce the incidence of CIN. However not all studies have uniformly shown a benefit, and there are variations in NAC dosing. Its use may be considered in high risk patients but is not considered mandatory.

Ascorbic Acid

A randomised, placebo-controlled trial of ascorbic acid in 231 patients with SCr ≥ 1.2mg/dL who underwent coronary angiography and/or intervention showed that ascorbic acid reduced the risk of CIN compared with placebo (OR, 0.38; 95% CI, 0.17 to 0.85; P=0.02).[7] However, another trial failed to detect a significant risk reduction in CIN when ascorbic acid was used as an adjunct to hydration.[8] The benefit of ascorbic acid in the prevention of CIN is inconclusive.

Sodium Bicarbonate

It has been proposed that free radical formation is promoted by an acidic pH typical of tubular urine but is inhibited by the higher pH of normal extracellular fluid. Therefore alkalinising the renal tubular fluid with bicarbonate may reduce CIN.

In a study, 119 patients with stable SCr levels of at least 1.1 mg/dL (97.2 μgmol/L) were randomised to receive a 154-mEq/L infusion of either sodium chloride (n=59) or sodium bicarbonate (n=60) before and after iopamidol administration found that sodium bicarbonate was more effective than sodium chloride infusion as prophylaxis of CIN.[9] A systematic review and meta-analysis (12 trials, 1,854 participants) showed that sodium bicarbonate significantly decreased the risk of CIN but without a significant difference in need for renal replacement therapy, in-hospital mortality, or congestive heart failure compared with normal saline with or without NAC. Risk reduction for CIN was seen when sodium bicarbonate was compared with normal saline alone, but not when sodium bicarbonate/NAC combination was compared with NAC/normal saline combination.[10]

Effectiveness of sodium bicarbonate to prevent CIN in high-risk patients remained uncertain in another systematic review (23 published and unpublished trials, 3563 patients, 396 CIN events). The pooled relative risk was 0.62 (95% CI, 0.45 to 0.86), with evidence of significant heterogeneity across studies. No clear effects of treatment on the risk for dialysis, heart failure, and total mortality were identified. Earlier reports probably overestimated the magnitude of any benefit, whereas larger, more recent trials have had neutral results.[11] Overall, these results suggest that sodium bicarbonate infusion may be superior to normal saline. However all of these studies are limited by small sample sizes. True benefit remains to be proven in larger, prospective multicentre trials.

Theophylline

Theophylline, a xanthine derivative, might reduce the risks of contrast-induced nephropathy. Theophylline 810 mg/day, starting 2 days before contrast and continuing until 3 days after contrast appeared to have prevented renal tubular damage for patients (n=80) undergoing contrast administration with preexisting renal insufficiency in a prospective, double-blind placebo-controlled study. A marker of tubular damage increased in both groups but significantly more in the placebo group.[12] A systematic review and meta-analysis of 6 randomised trials of theophylline for the prevention of contrast-induced nephropathy showed that theophylline (oral or IV) was associated with a tendency for risk reduction but was statistically non-significant. (RR 0.49, 95% CI 0.23-1.06)[13]

Conclusion

Conclusive, evidence-based recommendations for the prevention of CIN are difficult to be established from available evidence. This is due to: variations in the definition of CIN; different criteria for identification of high-risk patients; inconsistency in the administration of cotherapies, e.g. hydration; and small sample sizes with suboptimal study designs.

Pre- and post-hydration is the single most important protective measure for the prevention of CIN. Nephrotoxic drugs should be discontinued prior to contrast. The use of low-osmolar contrast media may be associated with lower risks of CIN, but its high cost militates against routine use in all patients, and many recommend that it should be continued to be reserved for those patients with multiple risk factors for CIN. Other strategies that are worth considering due to at least some evidence backing the efficacy are NAC and sodium bicarbonate. They are inexpensive, well tolerated and more worthwhile in "high-risk" patients but should not be considered mandatory.

References

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A Passion for Endurance Sports

Dr. Ferdinand CHU
Consultant, Department of Radiology, Queen Mary Hospital

Have you ever felt out of breath walking up a flight of stairs? As a lot of people do, I started to feel that way shortly after attaining the age of 40.

I have been a swimmer all my life. I stopped swimming competitively at the age of 30, having to prepare for my FRCR examinations. As far as swimming sprint distance is concerned, I peaked at the age of 23. By any standard, it was not a very prominent peak at all, but was rather unusual as most people peak much earlier. Not possessing much scientific knowledge on sports and fitness, I mistakenly believed that with a good sports background, only ad hoc exercises would be enough to maintain an age-defying level of fitness. I was dead wrong. My typical exercise pattern was 1.5 - 2km swim every week or so.

During the SARS epidemic in 2003, all swimming pools in Hong Kong were closed for a significant period of time. It was long enough to bring out my crave for exercise. Inspired by a childhood friend who once represented Hong Kong in international athletic meetings, I started to look for alternative forms of exercise. I started to jog regularly. I suffered from childhood asthma, which lingered on into adulthood. I still have occasional wheeze. As a result, jogging is something that I have never contemplated in doing. I have always thought that jogging was a boring monotonous sport. It has never been my cup of tea. Having started jogging regularly, I began to like it. Initially I set a goal of completing 4km, and when I felt comfortable doing it, I lengthened it to 6km and so on. After jogging regularly for a few months, I completed my first Standard Chartered 10km. My time was slow, but it did not matter. Completing the race, without injuries, was most important. The atmosphere, the cheering crowd and the enthusiasm of the volunteers completely changed my view on jogging. From then on my training was regular, regardless of heat, cold, rain and wind. People around me wondered whether my training would be too time-consuming and run the risk of having adverse effects on work and family. My answer to that is a STRONG and DEFINITE "no". Jogging for 10 - 12km each time is so convenient that one could easily snug in before work, before or after dinner or early morning on the weekends. Many a time, my kids would still be in bed or just having breakfast when I come home after a jog.

Thereafter, my training took shape, my time and endurance improved. I took part in several half-marathons in Hong Kong, Macau, Japan and Australia in the following years with gradual improvement in time. Knowing that I do not have the right build for a runner, I was fairly contended with half-marathons for several years. Banking on my endurance in swimming, I asked myself why I could not also participate in a sport that comprises running and swimming. The natural combination would be triathlon. It consists of swimming, cycling and running in a set order. At first, I was put off by the cycling leg which normally takes up to 40-50% of time in a typical triathlon race. As a compromise, I signed up for several aquathon races organised locally in Hong Kong. Aquathon races are short distance races with swimming and running legs. A typical one would be a combination of a 4km run and

a 500m swim. I did not find aquathon too interesting. May be it was because the races are not long enough to draw out my endorphins. I decided to re-explore the possibility of doing cycling training. I was inspired by a colleague who was a triathlon enthusiast and the one who had advised me on the purchase of my first bike. I finally acquired my own road bike in 2007, and completed an half Olympic distance triathlon race in Tai Mei Tuk late that year. Training on the bike is much less convenient than jogging. Thanks to Donald Tsang's five day week initiative, having some Saturdays off has been of great help. Bike training is now possible on the Saturdays, and not necessarily on week nights, riding with head lights on.

Last year, I started to get fed up by the word "half", half-marathon and half Olympic distance. With a strict discipline in training, I managed to complete a full Olympic distance triathlon in Hong Kong Disneyland in 2009, followed by my first full marathon run several months later in February 2010. I enjoyed both of them very much. Running a full marathon is a totally different ball game from half marathons and other endurance sports of shorter durations. It is a lot more demanding. Weekday training would no longer be enough. Part of the training would be sessions of at least 3 hour long slow run. For me, I would be doing 30km slow run, to improve endurance. For a person like me, the run would typically take 4 hours and followed by several hours of sleep afterwards.

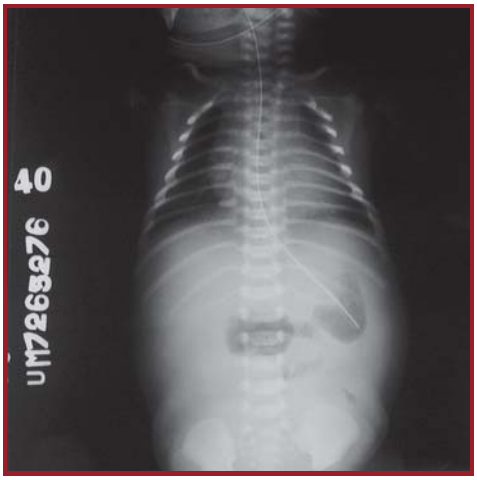
By now, endurance sports have well and truly become part of my life. It is a passion that came late, but I am so glad it did. I would continue to explore into this realm to realise more of my potentials and lead my life to its fullness. I sincerely hope more people would develop their passion in some kind of sports. If people could sacrifice an hour or so of their sleep, or the time to read a couple of articles in a magazine, they might bring about dramatic changes to their lives, health and psychological well-being.

Radiology Quiz

Dr. Wendy WM LAM

Consultant Radiologist, Queen Mary Hospital

Dr. Wendy WM LAM



M/Day 0

This is his AXR.

1. What are the radiological findings ?
2. What is your diagnosis or DDX ?

(See P.29 for answers)

The New FMSHK Team Member

Welcome to the FMSHK family! Our new Administrative Manager - Sonia Cheung, has joined us since June 10th, 2010.

Sonia comes to us with significant industry knowledge from her previous job in CMPMedica taking care of the Drug Information System. Moreover, she has extensive experiences in sales & marketing management in various industries and is well equipped with general management skills & capabilities from her MBA studies.

Coupled with her mission to create values for both the people & the organisations she serves and bring satisfaction to herself, Sonia looks forward to fulfilling her career aspirations as well as making valuable contributions to the FMSHK!

Society News

Updated Office-bearers of Member Societies

The Hong Kong Society of Gastroenterology
Updated office-bearers for the year 2010-2011 are as follows: President: Prof. Benjamin WONG; Honorary Secretary: Dr. Judy Wai-chu HO; Honorary Treasurer: Dr. Wai-cheung LAO

Hong Kong Society of Nuclear Medicine
Updated office-bearers for the year 2010-2011 are as follows: President: Dr. Wai-tat NGAI; Honorary Secretary: Dr. Chiu-ming LOK; Honorary Treasurer: Dr. Shing-kee CHEUNG

The FMSHK would like to send its congratulations to the new office-bearers and look forward to working together with the societies.

Welcome New Members

Hong Kong Association of Cosmetic Surgery Limited
President : Dr. Walter W.K. KING
Secretary : Dr. S.Y. YING
Treasurer : Dr. C.K. OR

Hong Kong Society for Quality of Life Limited
Chairperson : Mr. Kwok-fai LEUNG
Hon. Secretary : Ms. Margaret Siok-mui TAY
Hon. Treasurer : Mr. Yuen-hung LEE

Paediatric Neurology Association of Hong Kong
President : Prof. Virginia WONG
Secretary : Dr. KWONG Ling Karen
Treasurer : Dr. Kwok-yin CHAN

The FMSHK would like to welcome the above organisations as members of the Federation.

Upcoming Certificate Courses of the Federation of Medical Societies of Hong Kong

Date	Course No	Course Name	Target Participants	CME/CNE
3 Aug 2010 - 7 Sep 2010	C165	Certificate Course on Occupational Health & Hygiene for Healthcare Services	Medical and Health Professionals	9 CNE Points / CME Accreditation in application
23 Aug 2010 - 27 Sep 2010	C168	Certificate Course on Wilderness Medicine	Healthcare Professionals	9 CNE Points / CME Accreditation in application
14 Sep 2010 - 19 Oct 2010	C163	Certificate Course on Renal Medicine 2010	Medical and Health Professionals	9 CNE Points / CME Accreditation in application
15 Sep 2010 - 24 Nov 2010	C159	Certificate Course on Primary Care Geriatrics	General Practitioners and Healthcare Professionals	9 CNE Points / CME Accreditation in application
30 Sep 2010 - 4 Nov 2010	C164	Certificate Course on Respiratory Medicine 2010	Nurses and Allied Health Professionals	9 CNE Points / CME Accreditation in application

Course No. C168 | Certificate Course For Healthcare Professionals | CME / CNE Course

Certificate Course on Wilderness Medicine

Jointly organised by

The Federation of Medical Societies of Hong Kong

Hong Kong Society for Emergency Medicine and Surgery

Objectives

Hong Kong people are now keen to participate in wilderness activities. This course aims at providing the basic medical knowledge on wilderness medicine and specific practical information related to the situation in Hong Kong.

Date	Topics	Speakers
23 Aug 2010	Introduction to Wilderness Medicine 野外醫學介紹 Heat Stroke, Heat Exhaustion and Hypothermia 高温及低温症	Dr. Peter CHEE 池丕恩醫生 急症醫學專科醫生
30 Aug 2010	Vertical Limits, High Altitude and Diving Medicine 高度及深度極限；高山症及潛水引發的病症	Dr. Man-Kam HO 何文錦醫生 急症醫學專科醫生
6 Sep 2010	Management of Accidents in Wilderness, Wound Care, Fracture, Dehydration and Lightning 野外創傷處理，包括：傷口護理、骨折、脱水及雷擊	Dr. Yuet-Chung SIU 蕭粵中醫生 急症醫學專科醫生
13 Sep 2010	Snake Bite, Snake Recognition, Diagnosis of Envenomation, First Aid and Management in Wilderness 毒蛇咬傷處理，包括：認定蛇的品種、受毒蛇咬傷的診斷及在野外處理毒蛇咬傷的原理	Dr. Wah-Shan NG 伍華山醫生 急症醫學專科醫生
20 Sep 2010	Poisonous Sting and Bite, from Land to Sea and Infection in Wilderness 帶毒的刺傷及咬傷的診斷和處理及野外傳染病	Dr. Elvis MAK 麥應良醫生 急症醫學專科醫生
27 Sep 2010	Search and Rescue Service in Hong Kong 香港搜索及救援工作 Flight Physiology and its Implication in Patient Care 認識飛行生理及其對照顧病人的影響	Dr. Hing-Man MA 馬慶文醫生 高級航空醫生

Time 7:00 p.m. – 8:30 p.m.

Venue Auditorium, 1/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong

Language Media Cantonese (Supplemented with English)

Course Fee HK$750 (6 sessions)

Certificate Awarded to participants with a minimum attendance of 70%

Enquiry The Secretariat of The Federation of Medical Societies of Hong Kong
Tel : 2527 8898 **Fax :** 2865 0345 **Email :** info@fmshk.org

CME / CPD Accreditation in application

A total of **9 CNE** points for the whole course and the points will be awarded according to the number of hours attended.
Application form can be downloaded from website: http://www.fmshk.org

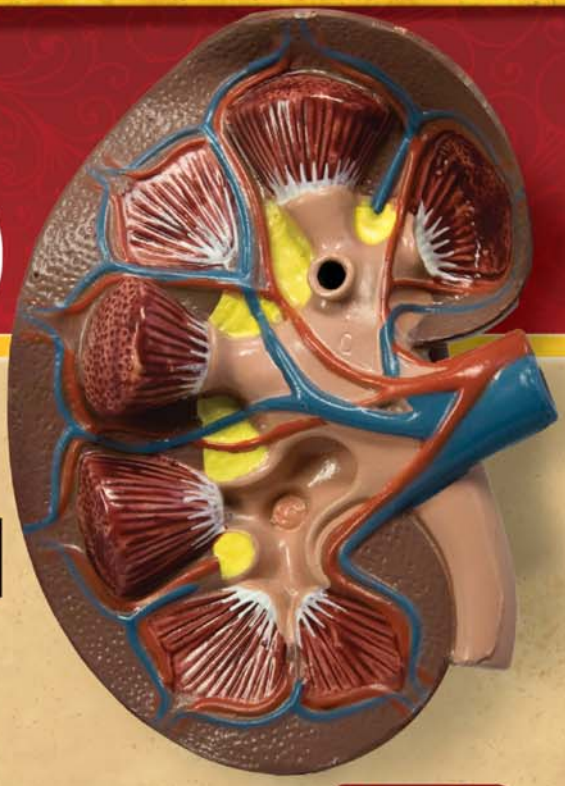
CERTIFICATE COURSE FOR MEDICAL AND HEALTH PROFESSIONALS

Course No. C163

CME / CNE Course

Certificate Course on

Renal Medicine 2010



Jointly organised by

The Federation of Medical Societies of Hong Kong

Hong Kong Society of Nephrology

Objectives

To update the participants on new advances in renal medicine and clinical practice of common renal problems, and to help the participants to interpret results of common renal investigations.

14 Sep 2010

Topics	• How to screen for renal disease including approach to proteinuria & hematuria • How to interpret the electrolyte and acid base tests in renal disease
Speakers	Dr. Bonnie Ching-Ha KWAN Dr. Yuk-Lun CHENG

21 Sep 2010

Topics	• Update and management of glomerular disease • Update on DM Nephropathy
Speakers	Dr. Kai-Ming CHOW Dr. Kai-Chung TSE

28 Sep 2010

Topics	• How to interpret the common investigation tests for renal disease • Update and management of acute kidney injury
Speakers	Dr. Chik-Cheung CHOW Dr. Siu-Fai CHEUNG

5 Oct 2010

Topics	• Update and management of chronic kidney disease • Medications and chronic kidney disease
Speakers	Dr. Ping-Nam WONG Dr. Kay-Tai LEUNG

12 Oct 2010

Topics	• Update on hemodialysis therapy • Update on peritoneal dialysis therapy
Speakers	Dr. Hon-Lok TANG Dr. Man-Fai LAM

19 Oct 2010

Topics	• Update on management of kidney donors • Update on management of renal transplant recipients
Speakers	Dr. Kwok-Hong CHU Dr. Yiu-Han CHAN

Time	7:00 p.m. – 8:30 p.m.
Venue	Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong
Language Media	English (Supplemented with Cantonese)
Course Fee	HK$750 (6 sessions)
Certificate	Awarded to participants with a minimum attendance of 70%
Enquiry	The Secretariat of The Federation of Medical Societies of Hong Kong **Tel :** 2527 8898 **Fax :** 2865 0345 **Email :** info@fmshk.org

CME / CPD Accreditation in application

A total of **9 CNE** points for the whole course and the points will be awarded according to the number of hours attended.

Application form can be downloaded from website: http://www.fmshk.org

Course No. C164

CERTIFICATE COURSE FOR NURSES AND ALLIED HEALTH PROFESSIONALS

CME / CNE Course

Certificate Course on Respiratory Medicine 2010

Jointly organised by

The Federation of Medical Societies of Hong Kong
香港醫學組織聯會

Hong Kong Thoracic Society
香港胸肺學會

American College of Chest Physicians
Hong Kong and Macau Chapter Limited
美國胸肺學院（港澳分會）

Date	Topics	Speakers
30 Sep 2010	Advances in Diagnosis and Treatment of Unresectable Lung Cancer	Dr. Matthew King-Yan WONG 黃敬恩醫生
7 Oct 2010	Pleural Diseases and Management of Pleural Effusion	Dr. Johnny Wai-Man CHAN 陳偉文醫生
14 Oct 2010	Sleep Related Breathing Disorder – Diagnosis and Treatment	Dr. Kah-Lin CHOO 俞佳琳醫生
21 Oct 2010	Pharmacological Treatment of COPD and Asthma	Dr. Wilson Kwok-Sang YEE 易國生醫生
28 Oct 2010	Surgical Intervention for Lung Cancer	Dr. Chan-Chung MA 馬燦忠醫生
4 Nov 2010	Lung Transplantation – the Local Perspectives	Dr. Chi-Fong WONG 王志方醫生

Dates	30 September 2010 – 4 November 2010 (Every Thursday)
Time	7:00 p.m. – 8:30 p.m.
Venue	Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong
Language Media	English (Supplemented with Cantonese)
Course Fee	HK$750 (6 sessions)
Certificate	Awarded to participants with a minimum attendance of 70%

Enquiry
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The Federation of Medical Societies of Hong Kong
Tel : 2527 8898
Fax : 2865 0345
Email : info@fmshk.org

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A total of **9 CNE** points for the whole course and the points will be awarded according to the number of hours attended.
Application form can be downloaded from website: http://www.fmshk.org

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	★Joint Surgical Symposium - Reducing Complications in Colorectal Surgery 2	3
4	★HKMA Choir Rehearsal 5	★HKMA Hong Kong East Community Network - CME Lecture on "Cholesterol and Cardiovascular Disease" ★HKMA CME - Eye Course 2010 ★HKMA Kowloon West Community Network - Optimizing Glycemic Control for Type 2 Diabetes Patients ★FMSHK Officers' Meeting 6	★HKMA NT West Community Network - Certificate Course on Mood Disorders (III) ★HKMA - "Practical Health Informatics Course for Doctors" (IV) ★HKMA Orchestra Rehearsal 7	★HKMA NT West Community Network - A Tour to Castle Peak Hospital ★HKMA Structured CME Programme with Hong Kong Sanatorium & Hospital Year 2010 - Management of Infertility in Primary Care ★HKMA Council Meeting 8	9	★GB ONG LECTURE: Prostate Cancer - A Disease of Our Time ★HKMA Trailwalker First Briefing Session ★GEORGE CHOA LECTURE: Head & Neck Surgery: The Path We Have Treaded 10
★HKMA Certificate Course on Family Medicine 2010 ★Charity Wargame with Law Society of Hong Kong 11	★HKMA Choir Rehearsal 12	13	★HKMA Orchestra Rehearsal ★HKMA Central, Western & Southern Community Network - "Certificate Course Management of Common Urological Problems for Primary Healthcare Providers" (Session 4) ★HKMA Shatin Doctors Network - Erectile Dysfunction: from Pathology to Daily Management 14	★FMSHK Executive Committee Meeting 15	★HKMA Kowloon East Community Network - When & How To Start Insulin? ★HKMA Shatin Doctors Network - Delirium, Dementia, and Other Commonly Encountered Syndromes among Elderly People: Management and Current Available Services 16	★The Federation's Annual Scientific Meeting - Clinical Applications of Umbilical Cord Blood Cells ★HKMA Kowloon East Community Network - Joint CME Course for Health Personnel 2010 on "Management of Breast Lumps" ★Refresher Course for Health Care Providers 2009/ 2010 17
18	★HKMA Choir Rehearsal 19	★HKMA Hong Kong East Community Network - CME Lecture on "Influenza Vaccine" ★HKMA Kowloon West Community Network- Smoking Cessation: Practical Tips ★HKMA Tai Po Community Network - Know More About Obstructive Sleep Apnea 20	★HKMA Shatin Doctors Network - Insulin Strategies in Type 2 Diabetes Mellitus 21	★HKMA NT West Community Network - Recent Advances in Acne Treatment ★An Application of PAV in Servere COPD & New Kids on the Block ★HKMA Annual General Meeting 22	★Press Conference for Annual Charity Concert 23	24
★HKMA Kowloon Districts Community Networks Public Education Day ★Joint Professional Snooker Tournament 25	★HKMA Choir Rehearsal 26	★HKMA Tai Po Community Network - Know More About Obstructive Sleep Apnea 27	★HKMA Central, Western & Southern Community Network - Lecture Series on Diabetes Mellitus (Series One) 28	★HKMA NT West Community Network - Certificate Course on Mood Disorders (IV) 29	30	★HKMACF Charity Concert 31

Medical Diary of July

Date / Time	Function	Enquiry / Remarks
2 FRI 8:00 am - 9:00 am	**Joint Surgical Symposium - Reducing Complications in Colorectal Surgery** Organiser: Department of Surgery, The University of Hong Kong & Hong Kong Sanatorium & Hospital, Speakers: Prof. LAW Wai-Lun & Dr. Joe FAN, Venue: Hong Kong Sanatorium & Hospital	Department of Surgery, Hong Kong Sanatorium & Hospital Tel: 2835 8698 Fax: 2892 7511 1 CME Point (Active)
5 MON (12, 19, 26) 8:00 pm	**HKMA Choir Rehearsal** Organiser: The Hong Kong Medical Association, Venue: Rehearsal Hall, Sheung Wan Civic Centre	Ms. Candy YUEN Tel: 2527 8285
6 TUE 1:00 pm	**HKMA Hong Kong East Community Network - CME Lecture on "Cholesterol and Cardiovascular Disease"** Organiser: HKMA Hong Kong East Community Network, Venue: HKMA Head Office (5/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Miss Alice TANG Tel: 2527 8285
1:15 pm	**HKMA CME - Eye Course 2010** Organiser: The Hong Kong Medical Association, Speaker: Dr. PONG Chiu Fai, Jeffrey, Venue: The HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Miss Viviane LAM Tel: 2527 8452 1 CME Point
1:00 pm	**HKMA Kowloon West Community Network - Optimizing Glycemic Control for Type 2 Diabetes Patients** Organiser: HKMA Kowloon West Community Network, Chairman: Dr. LAM Ngam, Raymond, Speaker: Dr. LEE Ka Kui, Venue: Maxim's Palace, G/F., Shop G27, Luk Yeung Galleria, Tsuen Wan, New Territories	Miss Carman WONG Tel: 2527 8285 1 CME Point
8:00 pm - 10:00pm	**FMSHK Officers' Meeting** Organiser: The Federation of Medical Societies of Hong Kong, Venue: Gallop, 2/F., Hong Kong Jockey Club Club House, Shan Kwong Road, Happy Valley, Hong Kong	Ms. Sonia CHEUNG Tel: 2527 8898 Fax: 2865 0345
7 WED 1:00 pm	**HKMA NT West Community Network - Certificate Course on Mood Disorders (III)** Organiser: HKMA NT West Community Network, Chairman: Dr. YAN Kam Sun Charlie, Speaker: Dr. AU Ming Kai, Venue: Plentiful Delight Banquet, 1/F, Ho Shun Tai Building, 10 Sai Ching Street, Yuen Long, NT	Miss Alice TANG Tel: 2527 8285 1.5 CME Points
1:00 pm	**HKMA - "Practical Health Informatics Course for Doctors" (IV)** Organiser: The Hong Kong Medical Association, Speakers: Mr. Edmund TSE; Mr. Michael CHIU & Mr. Clifford TSE, Venue: Lecture Theatre, G/F, Block F, United Christian Hospital, 130 Hip Wo Street, Kwun Tong, Kowloon	Miss Carman WONG Tel: 2527 8285 1.5 CME Points
8:00 pm (14)	**HKMA Orchestra Rehearsal** Organiser: The Hong Kong Medical Association, Venue: Pui Ching Academy	Ms. Candy YUEN Tel: 2527 8285
8 THU 1:30 pm	**HKMA NT West Community Network - A Tour to Castle Peak Hospital** Organiser: HKMA NT West Community Network, Venue: CPH	Miss Alice TANG Tel: 2527 8285
2:00 pm	**HKMA Structured CME Programme with Hong Kong Sanatorium & Hospital Year 2010 - Management of Infertility in Primary Care** Organiser: The Hong Kong Medical Association, Speaker: Dr. Ingrid LOK, Venue: The HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Miss Viviane LAM Tel: 2527 8452 1 CME Point
8:00 pm	**HKMA Council Meeting** Organiser: The Hong Kong Medical Association, Chairman: Dr. H.H. TSE, Venue: HKMA Head Office, 5/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Ms. Christine WONG Tel: 2527 8285
10 SAT 12:10 pm - 1:10 pm	**GB ONG LECTURE: Prostate Cancer - A Disease of Our Time** Organiser: Hong Kong Chapter of American College of Surgeons and Department of Surgery, The University of Hong Kong, Speaker: Prof. Freddie C HAMDY, Venue: Underground Lecture Theatre, New Clinical Building, Queen Mary Hospital, Pokfulam, Hong Kong	Tel: 2255 4885 / 2255 4886 Email: hksf@hku.hk Website: http://www.hku.hk/surgery
4:00 pm	**HKMA Trailwalker First Briefing Session** Organiser: The Hong Kong Medical Association, Venue: The HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Ms. Dorothy KWOK Tel: 2527 8285
5:30 pm - 6:30 pm	**GEORGE CHOA LECTURE: Head & Neck Surgery: The Path We Have Treaded** Organiser: Hong Kong Chapter of American College of Surgeons and Department of Surgery, The University of Hong Kong, Speaker: Prof. William I WEI, Venue: 5/F, Lecture Theatre, Professorial Block, Queen Mary Hospital, Pokfulam, Hong Kong	Tel: 2255 4885 / 2255 4886 Email: hksf@hku.hk Website: http://www.hku.hk/surgery
11 SUN 2:00 pm	**HKMA Certificate Course on Family Medicine 2010** Organiser: The Hong Kong Medical Association, Speakers: Dr. CHAN Kwok Wai; Dr. NG Chun Kwan, Alan, Venue: Queen Elizabeth Hospital, Kowloon	Miss Viviane LAM Tel: 2527 8452 3 CME Points
2:30 pm	**Charity Wargame with Law Society of Hong Kong** Organiser: The Hong Kong Medical Association, Venue: PMC Training	Ms. Dorothy KWOK Tel: 2527 8285
14 WED 1:00 pm	**HKMA Central, Western & Southern Community Network - "Certificate Course Management of Common Urological Problems for Primary Healthcare Providers" (Session 4)** Organiser: HKMA Central, Western & Southern Community Network, Chairman: Dr. LAM Wing Wo, Speaker: Dr. HO Man Tzit, Kossen, Venue: The HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Miss Alice TANG Tel: 2527 8285 1 CME Point
2:00 pm	**HKMA Shatin Doctors Network - Erectile Dysfunction: from Pathology to Daily Management** Organiser: HKMA Shatin Doctors Network, Speaker: Prof. NG Chi Fai Anthony, Venue: Royal Park Hotel, Shatin	Dr. MAK Wing Kin Tel: 2649 4466
15 THU 8:00 pm - 10:00 pm	**FMSHK Executive Committee Meeting** Organiser: The Federation of Medical Societies of Hong Kong, Venue: Council Chambers, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong	Ms. Sonia CHEUNG Tel: 2527 8898 Fax: 2865 0345

Date / Time	Function	Enquiry / Remarks
16 FRI 1:15 pm	**HKMA Kowloon East Community Network - When & How To Start Insulin?** Organiser: HKMA Kowloon East Community Network, Speaker: Dr. CHOI Cheung Hei, Venue: Lei Garden Restaurant, Shop L5-8, Level 5, APM Millennium City 5, 418 Kwun Tong, Road, Kowloon	Ms. Sandra CHU Tel: 2387 8555 1 CME Point
2:00 pm	**HKMA Shatin Doctors Network - Delirium, Dementia, and Other Commonly Encountered Syndromes among Elderly People: Management and Current Available Services** Organiser: HKMA Shatin Doctors Network, Speaker: Prof. Jean WOO, Venue: Royal Park Hotel, Shatin	Dr. MAK Wing Kin Tel: 2649 4466 1 CME Point
17 SAT 1:00 pm - 6:00 pm	**The Federation's Annual Scientific Meeting - Clinical Applications of Umbilical Cord Blood Cells** Organiser: The Federation of Medical Societies of Hong Kong, Chairman: Dr. Gilberto LEUNG, Speakers: Various, Venue: M/F, Lecture Theatre, Hospital Authority Building, 147B Argyle Street, Kowloon	Ms. Karen CHU Tel: 2527 8898 Fax: 2865 0345 2.5 CNE Points CME/CPD Accreditation in Application
1:30 pm	**HKMA Kowloon East Community Network - Joint CME Course for Health Personnel 2010 on "Management of Breast Lumps"** Organiser: HKMA Kowloon East Community Network; Hong Kong College of Family Physicans & United Christian Hospital, Chairman: Dr. YUNG Cho Yiu, Speaker: Dr. CHAN Wing Wai, Sharon, Venue: Lecture Theatre, G/F., Block F, United Christian Hospital, Kowloon	Ms. Gary WONG Tel: 3513 4821
2:30 pm	**Refresher Course for Health Care Providers 2009/ 2010** Organiser: The Hong Kong Medical Association and Our Lady of Maryknoll Hospital, Speaker: Ms. Jane LEE, Venue: Training Room II, 1/F., OPD Block, Our Lady of Maryknoll Hospital, 118 Shatin Pass Road, Wong Tai Sin, Kowloon, Hong Kong	Ms. Clara TSEUNG Tel: 2354 2440 2 CME Points
20 TUE 1:00 pm	**HKMA Hong Kong East Community Network - CME Lecture on "Influenza Vaccine"** Organiser: HKMA Hong Kong East Community Network, Venue: HKMA Head Office, 5/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Miss Alice TANG Tel: 2527 8285
1:00 pm	**HKMA Kowloon West Community Network- Smoking Cessation: Practical Tips** Organiser: HKMA Kowloon West Community, Speaker: Dr. LAM Bing, Venue: Crystal Room I-III, 30/F, Panda Hotel, 3 Tsuen Wah Street, Tsuen Wan, NT	Miss Carman WONG Tel: 2527 8285 1 CME Point
1:00 pm *(27)*	**HKMA Tai Po Community Network - Know More About Obstructive Sleep Apnea** Organiser: HKMA Tai Po Community Network, Speaker: Dr. SHE Hoi Wah & Dr. KWONG Shu Keung, Venue: Chiu Chow Garden Restaurant, Shop 001-003, 1/F, Uptown Plaza, Tai Po, NT	Ms. Joyce TSUNG & Ms. Teresa LEUNG Tel: 2664 3808
21 WED 1:15 pm	**HKMA Shatin Doctors Network - Insulin Strategies in Type 2 Diabetes Mellitus** Organiser: HKMA Shatin Doctors Network, Speaker: Dr. CHAN Kwok Wing Fredriech, Venue: Royal Park Hotel, Shatin	Ms. Sandra CHU Tel: 2387 8555 1 CME Point
22 THU 1:00 pm	**HKMA NT West Community Network - Recent Advances in Acne Treatment** Organiser: HKMA NT West Community Network, Speaker: Dr. LEUNG Wai Yiu, Venue: Plentiful Delight Banquet, 1/F, Ho Shun Tai Building, 10 Sai Ching Street, Yuen Long, NT	Miss Alice TANG Tel: 2527 8285 1.5 CME Points
6:30 pm - 8:00 pm	**An Application of PAV in Servere COPD & New Kids on the Block** Organiser: Hong Kong Thoracic Society / ACCP(HK & Macau Chapter), Chairman: Dr. WONG Kam Cheung & Dr. WONG Wing Ching, Speakers: Dr. HO Man Ying & Drs. WAI Ka Yan/WONG Wing Ching, Venue: LG1, Lecture Room, Ruttonjee Hospital, Wanchai, Hong Kong	Dr. James CM HO / Dr. Johnny WM CHAN Tel: 2255 4999 Fax: 2872 5828 1 CME Point
9:00 pm	**HKMA Annual General Meeting** Organiser: The Hong Kong Medical Association, Chairman: Dr. H.H. TSE, Venue: HKMA Head Office, 5/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Ms. Christine WONG Tel: 2527 8285
23 FRI 3:00 pm	**Press Conference for Annual Charity Concert** Organiser: The Hong Kong Medical Association Charitable Foundation and The Hong Kong Medical Association, Venue: The HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Ms. Candy YUEN Tel: 2527 8285
25 SUN 3:00 pm	**HKMA Kowloon Districts Community Networks Public Education Day** Organiser: HKMA Kowloon Districts Community Networks, Venue: Olympian City 2, Kowloon	Miss Carman WONG Tel: 2527 8285
	Joint Professional Snooker Tournament Organiser: The Hong Kong Medical Association, Venue: General Snooker Club, Tsim Sha Tsui, Kowloon	Ms. Dorothy KWOK Tel: 2527 8285
28 WED 1:00 pm	**HKMA Central, Western & Southern Community Network - Lecture Series on Diabetes Mellitus (Series One)** Organiser: HKMA Central, Western & Southern Community Network, Venue: The HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Miss Alice TANG Tel: 2527 8285
29 THU 1:00 pm	**HKMA NT West Community Network - Certificate Course on Mood Disorders (IV)** Organiser: HKMA NT West Community Network, Chairman: Dr. CHEUNG Kwok Wai Alvin, Speaker: Dr. John SO, Venue: Plentiful Delight Banquet, 1/F, Ho Shun Tai Building, 10 Sai Ching Street, Yuen Long, NT	Miss Alice TANG Tel: 2527 8285 1.5 CME Points
31 SAT 8:00 pm	**HKMACF Charity Concert** Organiser: The Hong Kong Medical Association Charitable Foundation, Chairman: Dr. PC CHOW, Venue: Concert Hall, HK City Hall	Ms. Candy YUEN Tel: 2527 8285

Course

19/8/2010	**Seminar on "How Can we Best Interact with the Media?" (Code No: MFC-10-01)** Organiser: College of Nursing, Hong Kong, Speaker: Ms. TAN Ee Lyn, Enquiry: Secretariat Tel: 2572 9255, Fax: 2838 6280, 1.5 CNE/PEM Point

Answer to Radiology Quiz

Diagnosis:
Duodenal stenosis

Radiological Findings:
Gastric tube in-situ seen inside the stomach.

Gas filling and distending the stomach and 1st part of duodenum is noted. "Double bubble" sign:
Minimal bowel gas in the rest of the abdomen.

Discussion:
1. The dilated stomach and duodenum form 'two bubbles'.
2. With atresia, there is no gas distal to the double bubbles.
3. With stenosis, there is gas distal to the double bubbles.
4. More acute causes of duodenal obstruction such as volvulus are typically not associated with duodenal dilatation.
5. 30% of patients with duodenal atresia are with Down syndrome.
6. Findings on radiography are diagnostic and typically, usually no other imaging is needed.
7. If distal gas is present and the diagnosis of stenosis is unclear, upper GI study is suggested to exclude mid-gut volvulus and the need for emergency surgery.
8. DDX include:
   i. Malrotation and mid-gut volvulus
   ii. Annular pancreas
   iii. Duodenal web

Dr. Wendy WM LAM

Consultant Radiologist, Queen Mary Hospital

solutions for interventional therapies

cerebral vascular diseases

aneurysm
arterial venous malformation
arterial venous fistula
intracranial atherosclerosis
acute stroke

peripheral vascular diseases

carotid artery stenting
renal artery stent
arterial angioplasty & stenting
venous angioplasty & stenting

oncology interventions

tumor embolization
RFA tumor ablation
biliary stenting
drainage

- stents • balloons • protection device
- thrombectomy system • embolization coils
- embolization particles • microcatheters
- guidewires • guiding catheters
- arterial sheath • RFA generator & probes
- diagnostic catheters • accessories

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