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Contents

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The Cover Shot

樹掛奇觀 是吉林省著名旅遊景點之一。它與桂林山水、長江三峽、雲南石林並稱我國四大自然奇景。在隆冬季節，每當細雪紛飛的早晨，沿吉林省松花江邊樹木的枝葉都凝霜掛雪、披銀垂玉，婀娜多姿。這就是霧淞，又名“樹掛"、“冰花"。多在黃昏形成，入夜加厚，至翌日，太陽照耀下開始溶化，脫落。我在松花江郊外民宿住上四天，幸運地只在離開的早上遇上。

影像以 16 光圈 1/250 快門拍攝。

Dr. Kin-ming WONG
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Prevention of Perinatal Transmission of Group B Streptococcal Infections

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Editor

Dr. KY LEUNG

It is important to prevent early onset neonatal Group B streptococcus (GBS) disease because it is a serious disease with a mortality rate of 5-10%. The disease can be prevented by administering intrapartum antibiotics (IAP) to high-risk pregnancies. It seems that universal swab-based strategy can prevent more early-onset GBS disease than clinical risk –based strategy, but extra resources and major organisational changes are required. In Hong Kong, all the public hospitals have been using the clinical risk-based strategy, but there is a plan to implement the universal swab-based strategy.

With a swab -based strategy, swabs are taken from both the lower vagina (vaginal introitus) without a speculum and rectum (swab through the anal sphincter) at 35–37 weeks' gestation. The swabs will be placed into a nonnutritive transport medium or in a refrigerator for temporary storage if processing is delayed. Selective broth media are recommended to enhance the isolation of GBS.

The maternal colonisation rate of GBS was reported to be around 10%. If a swab shows GBS, IAP, administered intermittently starting at least 4 hours before the baby is born, will be given. Penicillin remains the drug of choice for prophylaxis. An acceptable alternative is ampicillin. If a woman is allergic to penicillin, either clindamycin or vancomycin can be used but drug sensitivity should be tested.

On the other hand, antenatal treatment of asymptomatic vaginal/ rectal colonisation of GBS is not necessary as oral antibiotic treatment does not eliminate vaginal or rectal colonisation, and thus cannot prevent neonatal infection.

However, not all women accept swab based-screening because some think that it is unnecessary. There are concerns about side effects of antibiotics and emergence of drug resistant bacteria.

If the culture result is not available, IAP will be given to those women with a risk factor, namely, intrapartum fever, threatened preterm delivery (<37 weeks), or membrane rupture of over 18 hours. IAP is also indicated in women with antenatal GBS bacteriuria, or a previous delivery of a newborn with GBS disease.

Different rapid tests, such as fluorescent in situ hybridisation (FISH), real-time polymerase chain reaction (PCR) and the latex agglutination test (LAT), offer the potential for GBS detection during intrapartum, and may increase the effectiveness of the IAP. A test with high sensitivity and specificity should be chosen. Arranging an experienced laboratory staff to provide results 24 hours a day for 7 days is a challenge. A rapid test cannot give the results of antibiotic susceptibility.

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An Update on HPV Vaccine

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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 CME credit under the programme upon returning the completed answer sheet to the Federation Secretariat on or before 31 October 2011.

Introduction

Cervical cancer is the third most common cancer in women worldwide, with an estimated 530 000 new cases and 275 000 deaths in 2008. More than 85% of them occurred in developing countries.[1] In 2008, there were 358 new cases and 120 deaths reported in Hong Kong.[2]

Human Papillomavirus

Infection with the human papillomavirus (HPV) is a necessary, though insufficient, cause of cervical cancer. Almost all cervical cancers are attributed to HPV infection.[3] More than 40 HPV types have been detected from the female genital tract, and 15 of them (HPV-16, -18, -31, -33, -35, -39, -45, -51, -52, -56, -58, -59, -68, -73 and -82) are considered high-risk types that are associated with cervical cancers. HPV-16 and HPV-18 together account for about 70% of all cervical cancers worldwide. The importance of other high-risk HPV types differs in different parts of the world. Data in Hong Kong showed that HPV-52 and -58 were found in 13.2% and 8.8% of cervical cancers respectively, while HPV-31, -33, and -45 each accounted for less than 5%.[4] Low-risk HPV types cause genital warts, among which, HPV-6 and -11 account for about 90% and 10-30% respectively.[5,6]

HPV Transmission

The majority of anogenital HPV is sexually transmitted. While up to 70% of sexually active women will become infected in their lifetime,[7] the majority of these infections are transient with over 90% spontaneously cleared within 24 months.[8] It is the persistent infection with high-risk HPV that is important in causing cervical cancer. However, there is currently no way of predicting which infection will persist.[9]

Non-sexual routes of transmission are uncommon, but possible routes include vertical transmission from mother to newborn,[10] finger-genital transmission[11] and transmission via formites and environmental surfaces.[12]

Prophylactic HPV Vaccines

Following natural infection, about 50% of women will have no measurable immune response. Those who have the response show low antibody levels, which may not be able to protect them against re-infection.[13] Prophylactic vaccination aims to prevent HPV infection by inducing high levels of serum neutralising antibodies by antigens (virus-like particles) that closely mimic the native virus structure. Adjuvants are compounds that are added to the vaccines to enhance the specific immune response to vaccine antigens.

Two prophylactic vaccines are currently available for prevention of HPV infection and the development of cervical neoplasia. The amorphous aluminium hydroxyphoshpate sulphate (AAHS)-adjuvanted quadrivalent HPV-6/11/16/18 vaccine (Gardasil®) was licensed in Hong Kong in 2006 for women aged 9-26 years. The age indication was extended to 45 years in 2010. It is also licensed for use in males aged 9-15 years for the prevention of HPV-6 and -11 related genital warts. The other vaccine, the ASO4-adjuvanted bivalent HPV-16/18 vaccine (CervarixTM) was licensed in Hong Kong in 2008 for women aged 10 to 25 years. Both products are to be delivered intramuscularly in three separate doses within six months.

Efficacy

Differences among efficacy trials of the quadrivalent and bivalent vaccines in terms of populations analysed, choice of control subjects and immunological assays preclude direct comparison of results for the two vaccines. However, both vaccines demonstrated high efficacy (>90%) against HPV-16/18 related cervical intraepithelial neoplasia grade 2 and grade 3 (CIN 2/3) and adenocarcinoma in situ (AIS), which served as the surrogate endpoints for cervical carcinoma.

Data from the quadrivalent vaccine trials showed that the efficacy against vaccine-type-related CIN 2/3 or AIS was 99% for those women aged 16-26 years who received all three doses with negative HPV-16/18 DNA and serology at baseline.[14] The efficacy against vulvar and vaginal intraepithelial neoplasia grade 2 and grade 3 (VIN 2-3/VaIN 2-3) and genital warts was 95.4% and 96.4% respectively.[15] The efficacy was also persistently high (>90%) in older age women (aged 24-45 years).[16]

For the bivalent vaccine, the efficacy against HPV-16/18 associated CIN 2+ lesions (defined as CIN 2/3, AIS and invasive carcinoma) was 92.9% for those aged 15-25 years who received all three doses and had normal or low-grade cytology at baseline.[17]

Follow-up Efficacy and Mathematical Modelling Studies

Both vaccines showed high efficacy against vaccine-type HPV associated CIN2+ for at least seven years.[18,19] There was no breakthrough CIN 2+ in the vaccine recipients during the follow-up periods. The antibody levels were persistently high and remained at or several-fold above those following natural infections after 5 to 7.3 years.[19,20]

While awaiting the long-term efficacy results of ongoing trials, mathematical modelling studies for both vaccines had predicted that the antibody titres would remain well above natural infection levels for at least 20 years.[21,22] However, since immune correlate of protection for HPV vaccination remains unknown, the actual duration of protection will only be established by long-term efficacy studies.

Cross-protection Against Non-vaccine High-risk HPV Types

Besides HPV-16 and HPV-18, which account for about 70% of all cervical cancers, other high-risk HPV types (HPV-31, -33, -35, -39, -45, -52, -58, -59 and -68) are associated with more than 20% of cervical cancers.[23] Given the polyclonal nature of the immune response to vaccination, it is postulated that anti-HPV-16 and anti-HPV-18 antibodies generated by vaccination may provide additional cross-protection associated with these non-vaccine type HPV.

Studies for both vaccines showed roughly similar efficacy pattern against persistent infection (≥ 6 months) and CIN lesions associated with these non-vaccine HPV types, except HPV-45, for which the bivalent vaccine but not the quadrivalent vaccine appeared to have a clear effect. The highest level of protection was against HPV-31 (70-90% against CIN 2+). The efficacy against a combination of HPV-31/33/45/52/58-associated CIN 2+ in women who were negative for high-risk HPV DNA at baseline was 53% and 32.5% respectively for the bivalent and quadrivalent vaccines.[17,24] While HPV-52 and -58 are more prevalent in Asia including Hong Kong,[4,25] data from a quadrivalent vaccine trial showed that the efficacy was about 20%.[24]

Head to Head Immunogenicity Comparison of the Two Available HPV Vaccines

A recent trial directly comparing the two vaccines demonstrated that the bivalent vaccine showed a significantly higher neutralising antibody level than the quadrivalent vaccine at 24 months after the first dose (2.4-5.8-fold higher for HPV-16 and 7.7-9.4-fold higher for HPV-18). Moreover, it also showed higher anti-HPV-16/18 neutralising antibodies in cervicovaginal secretions and higher circulating HPV-16/18 specific memory B-cell frequencies compared with the quadrivalent vaccine.[26]

However, there are no data correlating antibody titres or memory B-cell response with clinical efficacy. Since both vaccines have shown high efficacy in the follow-up studies, the clinical significance of the differences in magnitude of immune response between the two vaccines remains to be elucidated.

Safety and Adverse Effects

Both vaccines are generally well tolerated and serious adverse effects are rare. There were previous concerns about serous adverse events including deaths after administration of the quadrivalent vaccine. However, after investigation of over 23 million doses in the United States, they were not causally linked with the vaccine and they were not greater than the expected background rate.[27]

The most common side effects include local injection site reactions, headache, syncope, nausea, vomiting, diarrhoea, abdominal pain, itchiness, rash, urticaria, myalgia, arthritis, fatigue and fever.[26] However, they are transient and will resolve spontaneously without sequelae. A study in Hong Kong for the bivalent vaccine also confirmed similar safety profiles.[28] The compliance rates with the three-dose schedules were consistently high (84%) for both vaccines.[26]

Data on both vaccines administered during pregnancy did not indicate any adverse outcome, but they were insufficient to recommend use during pregnancy.

Booster Dose

The necessity for booster vaccination largely depends on whether the immune memory can outpace the disease pathogenesis.[29] Since the immune correlate of protection for HPV vaccination remains unknown and the pace of HPV pathogenesis is uncertain, the requirement for booster vaccination remains to be determined.

Target Population

Since the benefit of protection is greatest in pre-sexually active adolescents who have not been exposed to the virus (efficacy about 40-70% against CIN 2+ irrespective of causative HPV types),[15,17] HPV vaccination has been included in some national immunisation programmes including the United Kingdom and Australia. However, it has not been included in the Hong Kong Childhood Immunisation Programme yet.

Women who are sexually active (who might have already been exposed to the virus) can also be protected from catch-up programmes. The efficacy was about 20-30% against all CIN 2+ irrespective of causative HPV DNA.[15,17]

Given that HPV infections may be transient and antibody levels are unable to correlate protection, HPV

DNA and serology testing are not recommended before vaccination. Patients with a past history of abnormal Pap test or cervical lesion are not precluded for vaccination since they might not be infected with any or all of the vaccine-type HPV. However, these women should be informed that the efficacy of vaccination could be diminished.

Public Health Implications

Studies showed that the vaccines significantly reduced the number of all Pap test abnormalities, colposcopy referrals, cervical excisional procedures and all procedures for external genital lesions (genital warts, VIN 1-3 or VaIN 1-3).[15,17] These reductions might be translated to a reduction of preterm births and other adverse pregnancy outcomes because these outcomes have been shown to be associated with the treatment of CIN.[17]

Despite all the benefits, vaccinated women should continue cervical screening since current HPV vaccines do not protect against all oncogenic HPV types. However, the current cervical cancer screening programme may require modifications in the future, such as starting screening at an older age and increasing the screening interval.[30]

The quadrivalent vaccine is also licensed for use in males aged 9-15 years for prevention of HPV-6 /11 related genital warts. A study showed a significant reduction (67.2%) of genital warts in 16-26 years old males regardless of their baseline HPV DNA and serology status.[31] It has also been postulated that vaccination in males might further protect females from HPV-16 and HPV-18 infection by inducing herd immunity.[32]

Conclusion

With the availability of high efficacy HPV vaccines, a well-organised HPV immunisation policy coupled with an effective cervical screening programme will probably be the mainstream strategy in the near future in reducing the global burden of cervical cancers.

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MCHK CME Programme Self-assessment Questions

Please read the article entitled "An Update on HPV Vaccine" by Dr. William WH LI and complete the following self-assessment questions. Participants in the MCHK CME Programme will be awarded 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 October 2011. 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. HPV-16 and HPV-18 together account for 100% of cervical cancers worldwide.
2. Low-risk HPV types (such as HPV-6 and -11) are associated with genital warts.
3. Most HPV infections are transient and can be cleared within 24 months. However, persistent infection with high-risk HPV types is essential for development of cervical cancers.
4. The currently available HPV vaccines are therapeutic vaccines.
5. The age indications for quadrivalent HPV-6/11/16/18 vaccine and bivalent HPV-16/18 vaccine in Hong Kong are 9-45 years and 10-25 years respectively.
6. Both currently available HPV vaccines have over 90% efficacies against all high-risk HPV related high-grade cervical intraepithelial neoplasia and cervical carcinoma.
7. There are data available to correlate antibody titres or memory B-cell response with clinical efficacy.
8. According to the available data, booster vaccination is required.
9. HPV DNA and serology testing before vaccination is recommended. Moreover, patients with a past history of abnormal Pap test or cervical lesion are contraindicated for vaccination.
10. Vaccinated women should continue cervical screening since HPV vaccines do not protect against all oncogenic HPV types.

ANSWER SHEET FOR OCTOBER 2011

Please return the completed answer sheet to the Federation Secretariat on or before 31 October 2011 for documentation. 1 CME point will be awarded for answering the MCHK CME programme (for non-specialists) self-assessment questions.

An Update on HPV Vaccine

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Answers to September 2011 Issue

Therapeutics of Alzheimer Disease

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

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An Update on the Management of Acute Pelvic Inflammatory Disease

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Introduction

Pelvic inflammatory disease (PID) consists of a spectrum of infections of the upper genital tract including endometritis, salpingitis, pelvic peritonitis and/or tubo-ovarian abscess. Early diagnosis and treatment of this disease is important in the prevention of long-term sequelae which include tubal factor infertility, ectopic pregnancy and chronic pelvic pain.

PID is the result of ascending infection from the lower to the upper genital tract. Various organisms have been isolated from the upper genital tract of women with PID, suggesting a polymicrobial nature for the infections. However, it most frequently occurs secondary to sexually transmitted diseases (STDs) in the lower genital tract, especially *Chlamydia trachomatis* and *Neisseria gonorrhoeae*, which is found in up to two thirds of women with PID[1]. Chlamydial infection is more common than gonococcal infection in PID. However gonococcal PID usually has a more acute presentation in terms of duration and severity of symptoms. Importantly, anaerobic organism like *Gardnerella vaginalis*, *Haemophilus influenza*, enteric Gram negative rods, and *Streptococcus agalactiae* from the vaginal flora have also been associated with PID[1].

Bacterial vaginosis is found in up to two thirds of women with PID[2]. It is an imbalance of the naturally occurring vaginal flora where the normal lactobacilli dominant environment is replaced by an anaerobic dominant environment in association with increasing Gardnerella vaginalis and genital mycoplasmas. Recently, *Mycolasma genitalium*, a sexually transmitted organism, has been associated with PID, and appears to present with mild clinical symptoms similar to chlamydial PID[3].

Diagnosis

The diagnosis of acute PID can be difficult due to the wide variation of symptoms and signs. Diagnosis should be based on clinical history, physical examination and to a lesser extent laboratory studies and imaging. The main clinical symptoms and signs suggestive of PID are listed in Table 1. These clinical symptoms and signs lack sensitivity and specificity for the diagnosis of PID. The positive predictive value of a clinical diagnosis is 65-90% compared with laparoscopic diagnosis[4]. While some cases of PID can be asymptomatic, many others are not diagnosed because of the mild or non-specific symptoms and signs of PID, such as abnormal bleeding, dyspareunia and vaginal discharge.

Table 1: Clinical features of women with clinically suspected pelvic inflammatory disease

Lower abdominal pain and tenderness
Abnormal vaginal or cervical discharge
Fever (>38°C)
Abnormal vaginal bleeding (intermenstrual bleeding / postcoital bleeding)
Deep dyspareunia
Urinary frequency
Low back pain
Nausea / vomiting
Cervical motion tenderness, uterine tenderness or adnexal tenderness

The Centres for Disease Control and Prevention (CDC) recommends that health care providers should maintain a low threshold for making the diagnosis of PID. Empiric treatment should be considered in sexually active young women and other women at risk for STDs if their symptoms could not be explained by other causes, particularly in the presence of cervical motion tenderness, uterine tenderness or adnexal tenderness.

Table 2: Investigations

Complete blood count (for leucocytosis)
Screening for sexually transmitted diseases • Endocervical swabs for Gonorrhoea and Chlamydia • High vaginal swab for Trichomonas • Serology for Syphilis (VDRL) and HIV infections
Cervical smear (for screening)
Blood or urine pregnancy test (to exclude ectopic pregnancy)

The investigations listed in Table 2 should be considered in women suspected of PID. Testing for *C. trachomatis* and *N. gonorrhoeae* is important as a positive result may support the clinical diagnosis. However, a negative result does not exclude PID. The peripheral white blood cell count is commonly normal in mild disease, and markers such as erythrocyte sedimentation rate or C-reactive protein, while correlating with the severity of PID, are non-specific findings. Although endometrial biopsy can provide histopathologic evidence of endometritis, there is insufficient evidence to support its routine use. Laparoscopy allows a more accurate diagnosis of salpingitis and tubo-ovarian abscess, and a more complete bacteriologic diagnosis. However, it is an invasive procedure and its routine use in the management of women with suspected PID may be difficult to justify. Imaging is useful when

there is a diagnostic uncertainty, such as the use of pelvic ultrasonography or computed tomography to rule out symptomatic ovarian cysts or appendicitis. Pelvic ultrasonography has limited sensitivity for the diagnosis of PID, but in the presence of thickened fluid filled tubes, the diagnosis of upper genital tract infection is likely. Imaging should be considered in women with severe PID because up to one third will have evidence of tubo-ovarian abscess.

Treatment

Treatment with antibiotics should be started as soon as possible, ideally within two days of the onset of symptoms. Studies have suggested that delaying treatment of PID increases the severity of the condition and the risk of long-term sequelae[5]. Broad spectrum antibiotic treatment is generally recommended to cover *C. trachomatis, N. gonorrhoeae* and anaerobic infection. Choice of the regimen may be influenced by severity of disease, history of allergy and patient preference. In mild or moderate PID (in the absence of tubo-ovarian abscess) there is no difference in outcome when women are treated as outpatients or admitted to hospitals[6]. The recommended regimens for mild or moderate PID are listed in Table 3[7,8].

Table 3: Outpatient antibiotic treatment for mild to moderate pelvic inflammatory diseases

Ceftriaxone 250mg IM in a single dose PLUS Doxycycline 100mg orally twice a day for 14 days AND Metronidazole 400mg orally twice a day for 14 days
Levofloxacin 500mg orally once a day for 14 days AND Metronidazole 400mg twice a day for 14 days
Ofloxacin 400mg orally twice a day for 14 days AND Metronidazole 400mg twice a day for 14 days
*Ceftriaxone 250mg IM in a single dose PLUS Azithromycin 1g/week for 2 weeks
#Moxifloxacin 400mg orally once a day for 14 days

**Clinical trial evidence is limited.*
#Three large RCTs support its efficacy but because of evidence of an increased risk of liver reactions and other serious risks (such as QT interval prolongation), this should be used only when it is considered inappropriate to use the other antibacterial agents recommended for PID or when these have failed.

Inpatient antibiotic treatment should be based on intravenous therapy (Table 4) and should be continued until 24 hours after clinical improvement, followed by oral therapy[7,8]. Admission to hospitals should be considered in situations listed in Table 5. Doxycycline should be administered orally when possible due to the pain associated with intravenous infusion, and both routes of administration provide similar bioavailability. The CDC recommends the use of cefotetan or cefoxitin for the treatment of PID but these agents are not easily available in Hong Kong. Therefore ceftriaxone, which has a similar spectrum of activity, is recommended. Alternatively, another third generation cephalosporin (e.g. ceftizoxime, cefotaxime) can also be used.

The CDC 2010 guidelines suggested optional addition of metronidazole for the treatment of PID. However, it indicates that anaerobes constitute a significant proportion of bacteria isolated in patients with PID and *in vitro* studies have identified that some anaerobes (e.g., *Bacteroides fragilis*) can cause tubal and epithelial damage. Therefore, in clinically severe diseases particularly in the presence of a tubo-ovarian abscess, proven or suspected infection with *Trichomonas vaginalis* or bacterial vaginosis, and recent history of uterine instrumentation, anaerobic cover should be considered.

Table 4: Inpatient antibiotic treatment

Ceftriaxone (Rocephin) 2g IV every 24 hours PLUS Doxycycline 100mg orally or IV every 12 hours FOLLOWED BY • Doxycycline 100mg orally twice a day AND Metronidazole 400mg orally twice a day to complete 14 days
Clindamycin 900mg IV every 8 hours PLUS *Gentamycin 2mg/kg loading dose followed by 1.5mg/kg every 8 hours (a single daily dose of 7mg/kg may be substituted) FOLLOWED BY • Doxycycline 100mg orally twice a day PLUS Metronidazole 400mg orally twice a day to complete 14 days OR • Clindamycin 450mg four times a day to complete 14 days
#Ofloxacin 400mg IV every 12 hours PLUS Metronidazole 500mg IV every 8 hours for 14 days
#Ciprofloxacin 200mg IV every 12 hours PLUS Doxycycline 100mg orally or IV every 12 hours PLUS Metronidazole 500mg IV every 8 hours for 14 days

**Gentamicin levels need to be monitored.*
#Clinical trial evidence is limited.

Table 5: Criteria for admission to hospitals

Surgical emergencies (e.g. appendicitis) cannot be excluded
Clinically severe disease (e.g. with nausea and vomiting or high fever)
Tubo-ovarian abscess
PID in pregnancy
Lack of response to oral therapy
Intolerance to oral therapy

75% of women with tubo-ovarian abscess will respond to antibiotic therapy alone. However, some will fail to respond and require surgical drainage[9]. The criteria for surgical drainage include failure to respond to antibiotic treatment within 48 to 72 hours as characterised by persistent fever, an increasing size of tubo-ovarian abscess and a persistent or increasing leukocytosis. Drainage of the tubo-ovarian abscess can be performed by laparoscopy, laparotomy or image guided percutaneous routes.

Due to the emergence of quinolone-resistant *N. gonorrhoeae* (QRNG), regimens that comprise of a quinolone agent are no longer recommended for the treatment of PID. In 2007-2008 the Gonococcal Antimicrobial Surveillance Programmes conducted by the World Health Organization in the Western Pacific and South East Asian Regions reported QRNG isolates in nearly 100% of isolates examined in Hong Kong and the Mainland China[10]. Recently, there are concerns expressed regarding the decreasing *in vitro* susceptibility of *N. gonorrhoeae* which was accompanied by clinical treatment failures with orally administered third-generation cephalosporins. Therefore, parenteral cephalosporin should be included in the treatment of gonococcal infections and PID in Hong Kong. If parenteral cephalosporin is not feasible (e.g. women with history of severe penicillin allergy), use of fluoroquinolones (levofloxaxin or ofloxaxin) with or without metronidazole can be considered if the community prevelance of gonorrhoea is <5%

or if the individual risk for gonorrhoea is low (e.g. in postmenopausal women who develop PID after uterine instrumentation). Alternatively, the addition of azithromycin 2g orally as a single dose to a quinolone-based PID regimen is recommended[11].

Patients should be advised to abstain from sexual intercourse until therapy is completed. Sex partners of women with PID caused by *C. trachomatis* and *N. gonorrhoeae* are often asymptomatic, and therefore should be screened and treated. Empirical treatment should be considered in their sex partners, regardless of the aetiology of PID or pathogens isolated from the infected woman, especially if adequate screening is not possible. In addition, referral of the sexual partners to a Social Hygiene Clinic can facilitate contact tracing and infection screening.

Special Considerations

Pregnancy

PID is rare in women with intrauterine pregnancy, except in cases of septic abortion. A pregnancy test should be done in all women suspected of having PID to exclude an ectopic pregnancy. There is no consensus on the optimal antibiotic regimen but treatment should cover the above mentioned organisms.

HIV Infection

HIV infected women with PID have similar symptoms to those women without HIV infection, except they were more likely to have tubo-ovarian abscess[12,13]. They respond equally well to the standard parenteral and oral antibiotic regimens.

Intrauterine Contraceptive Devices (IUCD)

The WHO expert Working Group on recommendations for contraceptive use concluded that removing the IUCD provides no additional benefit once PID is being treated with appropriate antibiotics[14]. Indeed, if a woman wants it to be removed, this should be done only after antibiotics have been started. However, removal should be considered if there is no clinical improvement or indeed deterioration despite antibiotic therapy.

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When to Perform HPV Testing?

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Introduction

Almost half a million women develop cervical cancer every year; more than half of them die as a result of their conditions. It is the third most common female malignancy ranking after breast and colorectal cancers in the year 2008[1]. After several decades of intensive research, there are now strong evidences to suggest that persistent infection with the oncogenic human papillomavirus (HPV) is a necessary cause of cervical cancer[2,3]. The oncogenic virus works by triggering alterations in the cervical cells, which can lead to the development of cervical intraepithelial neoplasia (CIN) and subsequent progression to cancer[4]. HPV infection is most common in young, sexually active populations, and more than 50% of all sexually active populations regardless of symptoms are infected at some point during their lives[5]. Although prevalence varies among countries, it reaches a peak of more than 20% among women aged 20-24, with a subsequent decline to approximately 3% among women aged 30 or more[6]. Most HPV infections in young females are transient and have little long-term significance. Up to 90% of the infections are cleared up within 2 years[7]. However, when the infection with oncogenic HPV persists, a minority develops into precancerous lesions, which can progress to invasive cancer[8]. This process usually takes more than 10 years, providing a long window period for detection and treatment of the precancerous lesion. Progression to invasive cervical cancer can almost always be prevented when standard prevention strategies are applied. The prevention programmes generally have relied on cytological testing using cervical smears which resulted in a 75% decline in the death rate[9]. The recognition of the obligatory role of oncogenic HPV in the development of cervical cancer has led to not only the development of HPV vaccines, but also the change in cervical cancer screening strategies with the incorporation of HPV testing[3, 10]. Epidemiological surveys of HPV prevalence, natural history studies of HPV infection and cross-sectional studies of HPV positivity in pathological specimens have led to 3 important conclusions: 1) HPV infection is detected in 99.7% of cervical cancers; 2) Persistent oncogenic HPV infection is necessary for the development of invasive cervical cancer; and 3) The negative predictive value of an HPV testing is high, especially in combination with a normal cervical smear result (>99%). A woman's oncogenic HPV status have important clinical significance and HPV testing is therefore discussed in the context of triage, primary screening and as a test of cure.

Triage of Women with ASC-US

The first United States Food and Drug Administration (FDA)-approved indication for HPV testing is atypical squamous cells of undetermined significance (ASC-US), the most common abnormality diagnosed on cervical smear[11]. The ASCUS-LSIL Triage Study (ALTS), a large sentinel study supported by the National Cancer Institute, demonstrated that most patients with ASC-US do not have any underlying CIN lesion and only about 15% of patients will have high-grade CIN[11]. The data also confirmed that "reflex" HPV testing was beneficial in triaging these patients[11]. The American Society for Colposcopy and Cervical Pathology (ASCCP) recommends women with ASC-US on smear and a positive HPV testing should be referred directly to colposcopy because these patients are at risk of having high-grade CIN[12]. Women with ASC-US on smear and a negative HPV testing are not at risk for a high-grade CIN lesion and can be managed with repeat smears in 12 months. According to ALTS data, the ASCCP also advises women with ASC-H and LSIL should be directly referred for colposcopy without HPV testing as most of these women were found to be HPV positive and at risk for high-grade CIN [12]. It is now understood that the frequency of HPV is significantly higher in adolescents compared to women 21 years of age or older. The incidence of cervical cancer in younger women is also extremely low. The ASCCP has addressed this issue and recommends that HPV testing should not be performed in women 20 years of age or younger with smear interpreted as ASC-US but rather to repeat the smear at 12 months. The patient should be referred to colposcopy only if the repeated smear shows a more severe finding.

Primary Screening with HPV Testing and Cytology

Since 99.7% of invasive cervical cancers worldwide contain oncogenic HPV, some researchers recommend that HPV testing should be done together with routine cervical screening. It was thought that by using both tests, patients of CIN missed by smear would be detected by HPV testing, thereby providing a more accurate screening result. The ASCCP recommendations suggest using HPV testing as a primary cervical cancer screening in conjunction with traditional smear in women 30 years and older; this is the other FDA-approved indication for the HPV testing[13]. In women 30 years of age or older the prevalence of oncogenic HPV infection is relatively low. With this relatively

low prevalence rate, the use of HPV testing becomes useful to distinguish those who have oncogenic HPV infection from those without and to develop appropriate management strategies. But, given the high prevalence of HPV in women younger than 30 years, routine HPV testing is not recommended as it would cause undue alarm to HPV carriers, more unnecessary follow-up testing, high number of referrals for colposcopy and treatment[14]. Combined smear and HPV testing has been proven effective in large clinical trials. It increased the sensitivity of detecting high-grade CIN from 60% to 95%[14]. Based on these data, the ASCCP consensus recommendation for management of women 30 years of age or older with a negative smear and a positive HPV testing is to return the patient for additional screening and repeat both tests at 12 months. If she shows the same pair of test results after additional screening, she should be referred for colposcopy. When a woman aged 30 or older has a negative smear and a negative HPV testing, she can return for screening in 3 years.

Management of Women with Colposcopically Confirmed Low-grade CIN

ASCCP guidelines do not recommend treating low-grade CIN confirmed by colposcopy and guided biopsy. However, the likelihood of progression to high-grade CIN in a subset of patients with persistent HPV infection increases each year. Therefore, close monitoring of patients with a low-grade CIN lesion is imperative. Suggested strategies include repeat smear every 6 months, with repeat colposcopy if the smear result is positive, and repeat HPV testing in 12 months, with repeat colposcopy if HPV testing is positive.

Post-treatment Follow-up of High-grade CIN

High-grade CIN will recur in about 10% of patients treated for the disease[15]. Furthermore, approximately 0.8% patients treated for high-grade CIN will develop invasive cancer[16]. Therefore, a close monitoring is mandated for these patients. Multiple large retrospective and prospective randomised studies have proven the association between the presence of oncogenic HPV at follow-up and the increased risk of developing recurrent disease. Thus, HPV testing has been used for follow-up after treatment for high-grade CIN and appears more accurate than smear alone. Persistence or clearance of the oncogenic HPV infection has proven to be a significant early marker, independent from other risk factors, both for failure or cure after treatment[17, 18]. ASCCP guidelines recommend smears every 6 months, either with or without colposcopy, for these patients. Another option is HPV testing at 6 to 12 months with referral to colposcopy if the HPV test results are positive.

Conclusions

A major advance in cervical screening is HPV testing, which makes identification of HPV infections readily available within the clinical setting. Despite the expectation of incorporating this test into several cervical cancer screening algorithms, data from clinical trials demonstrate only two specific instances in which HPV testing is beneficial: 1) Reflex HPV testing in women with ASC-US and 2) as an adjunct to cervical smear in women older than 30 years. These two indications allow triaging of only women at high risk of developing cervical cancer to colposcopy.

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Update on Management and Prevention of Vaginal Infections

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Vaginal Infections

For a better understanding of the pathophysiology of vaginal infections, the normal microbiological flora of the vagina should be noted. The following groups of organisms can be found in normal vaginas (1) Lactobacilli (2) Cocci including Staphylococcus aureus, Group B and Group D Streptococci (3) Bacilli: Gardnerella vaginalis, E Coli (4) Mycoplasma hominis, Ureaplasma urealyticum (5) Yeast: Candida albicans (6) Human papillomavirus.

The acidic milieu of the vagina (pH of 4.5) is maintained by lactobacilli (Doderlein's) which account for 95% of the bacteria found in the normal vaginal flora. This inhibits the growth of the other vaginal commensals under normal conditions. The presence of glycogen in the vagina provides substrate for lactic acid production which in turn depends on the patient's endogenous hormone status. So in young pubertal girls, pregnant women and menopausal ladies, the vaginal pH may be elevated. Other than the vaginal oestrogen concentration, there are other factors which may affect the vaginal ecosystem:

(1) Genetics: individual immune response
(2) Immune status: immediate postoperation (e.g. hysterectomy)
(3) Sexual activities: deposition of semen, saliva and other foreign bodies may affect the vaginal pH and immune functions
(4) Oral and vaginal medications
(5) Vaginal blood
(6) Contraception: oral contraceptive pills, intrauterine contraceptive device increase levels of Bacteroides species and group B streptococci
(7) Vaginal products like douche, tampons, pads etc

Approach to Patients with Vaginal Infection

The most common symptoms presented for vaginal infection are vaginal discharge, itchiness, vulval pain or soreness, pain during intercourse, etc. One of the structured approach for acute symptoms is shown in the box below.

(1) Where does it bother you
(2) How does it bother you
(3) When did it begin
(4) Do you have a new sexual partner
(5) Current contraceptive method
(6) What is your most concern

This approach is slightly different from the patient with chronic symptoms or recurrent vulvovaginitis.

There are many causes of vulvovaginal infections including candida infection, bacterial vaginosis, trichomoniasis, desquamative inflammatory vaginitis, genital herpes, human papillomavirus infection, bacterial infections, allergic vulvovaginitis and menopausal vulvovaginitis. The first three conditions are most common and will be discussed in more detail. To distinguish them based on symptoms and examination, the following table may be of use for general practitioners.

	Candida infection	Bacterial vaginosis	Trichomoniasis
Itchiness	Intense	Nil	Intense
Foul smell	+/-	Fishy	+/-
Colour	White	White/yellow	Green
Consistency	Curdy cheese	Thin	Thin
pH	Acidic < 4.5	4.5-7.0	4.5-7.0

Other than the signs and symptoms, a complete physical examination, pelvic and speculum examination are required to confirm the correct diagnosis. In the general practitioner setting, an initial treatment based on signs and symptoms (without pelvic examination) is acceptable but if there is no response, a complete examination should be performed. A wet mount smear and potassium hydroxide test for bacterial vaginosis are ideal for a quick bedside test but these are rarely done in our office setting. Instead the vaginal secretion can be sent to the laboratory for smear and culture.

Candida Infection

This is the commonest cause of vulvovaginal infections and 75% of women have infection once in their life time. Some patients have repeated episodes of infection or recurrent vulvovaginal candidiasis (RVVC, defined as 4 episodes of symptomatic infection per year, at least once proven by culture).

The causative agent is Candida albicans in the majority of patients and non-albicans account for the others (Candida glabrata, Candida tropicalis, Candida krusei, Candida prapsilosis). The predominant symptoms are

vulval and/or vaginal itchiness, curdy and sometimes thin non-offensive vaginal discharge, pain at intercourse or pain at urination. None of the symptoms is pathognomonic of the vulvovaignal candida (VVC) infection but in a primary care setting, presumptive diagnosis of VVC can be made without laboratory confirmation and initial empirical treatment can be tried first. If the patient does not respond, a proper vaginal examination and laboratory confirmation (vaginal secretion for wet smear and culture) should be arranged or the patient referred to a gynaecologist if such facility is not available in the primary care setting.

Patients may be occasionally found to have candida on culture or pap smear. No treatment is required unless the patient is symptomatic. In pregnancy, the presence of candida will not pose any risk of preterm labour unlike bacterial vaginosis and no treatment is required.

The diagnosis of VVC rests on the symptoms (itchiness, discharge), physical findings (curdy discharge, inflamed vulva and vagina), positive vaginal smear and culture. Some physicians will check the vaginal pH by taking some vaginal secretion and putting on a pH paper (pH < 4.5 in Candida infection and higher pH 4.5 to 7.0 in other infections).

Since all oral or topic antifungal treatments will achieve a 80 to 90% cure rate (symptoms and culture), the choice of treatment will depend very much on the individual practitioner's preference and the patient's past treatment history. In general azole therapy has replaced nystatin as azole is more active against candida and resistance to azole has not been reported.

Box: Therapy for Vaginal Candida Infection

Topical agents		
Clotrimazole	1% cream	5 gram x 7-14 days
	100 mg vaginal tablet	1 tablet x 7 days
	100 mg vaginal tablet	2 tablets x 3 days
	500 mg vaginal tablet	single dose
Miconazole	2% cream	5 gram x 7 days
	100 mg vaginal tablet	1 tablet x 7 days
	200 mg vaginal tablets	1 tablet x 3 days
	1200 mg vaginal tablet	single dose
Tioconazole	2% cream	5 gram x 3 days
Nystatin	100000 units vaginal tablets	1 tablet x 14 days
Dequalinium chloride	10 mg vaginal tablet	1 tablet x 6 days
Oral agents		
Ketoconazole	200 mg BD	400 mg x 5 days
Itraconazole	200 mg BD	400 mg X 1 day
	200 mg QD	200 mg x 3 days
Fluconazole	150 mg	150 mg single dose

For pregnant women, oral treatment should be avoided but local azole or nystatin can be used instead. For recurrent vulvovaginal candidiasis (RVVC), the diagnosis must first be confirmed by smear and culture as some of cases labelled as recurrent infections are in fact not due to candida infection. Also a culture will distinguish between Candida albicans and non-albicans as the treatment regimen will be different.

For RVVC, treatment will consist of acute treatment and prevention of recurrent attacks. A longer course or trying a different topical and/or oral antifungal treatment may be required. The male partner should be examined and treated if needed as the partner may be the source of infection. Other underlying diseases like diabetes mellitus, immunodeficiency, chronic steroid use should be excluded and/or optimised to decrease the frequency of attacks. A low carbohydrate diet, avoidance of sugar, avoidance of tight undergarment, avoidance of vaginal douching have been suggested but no randomised trials have been performed. The maintenance therapy for the prevention of attacks will include (1) weekly use of vaginal clotirmazole 500 mg (2) ketoconazole oral 100 mg daily for six months (3) fluconazole 150 mg oral weekly. Regular checking of liver function test is required for the last two treatment regimens.

For non-albicians candida infections, a longer course (2 week) treatment can be tried as most of them are resistant to the common drugs used. Boric acid 600 mg in a gelatin capsule vaginally for two weeks may be tried in resistant cases (contraindicated in pregnancy).

Bacterial Vaginosis

The aetiology of bacterial vaginosis (BV) is unknown but the pathophysiology is due to the marked reduction of H2O2 producing lactobacilli in the vagina and an overgrowth of three groups of bacteria: Mycoplasma hominis, Gardnerella vaginalis and anaerobes of which the last group account for the foul odour.

The patient will complain of an offensive, fishy smell discharge, white or yellow in colour. Some of the patients having BV can be asymptomatic. Unlike candida infection, most BV patients do not complain of vulval itchiness or soreness. The strict diagnosis will be by the Amsel criteria (thin white homogenous discharge, clue cells on smear, pH of vaginal fluid > 4.5 and release of a fishy odour on adding alkali of 10% potassium hydroxide) or the laboratory Nugent criteria (ratio of lactobacilli and Gardnerella). Both of the above criteria are not commonly used in clinical practice locally and instead the vaginal fluid can be sent to the laboratory for wet mount/Gram stain and microscopy (note: these organisms cannot be cultured).

The recommended oral treatment is standard:

(1) metronidazole 500 mg BD for 7 days
(2) metronidazole 2 gram single dose
(3) clindamycin 300 mg BD for 7 days

The alternatives are vaginal metronidazole or clindamycin cream.

There was an association of BV with increased incidence of preterm labour. In some overseas centres regular screenings for BV are performed during the course of pregnancy, but this is not a common practice in Hong Kong.

For patients with recurrent BV, prophylactic long term use of the above treatment can be considered for the prevention of BV plus treatment of the male partners and advice on the use of condom. Lactobacilli containing vaginal pessary e.g. Gynoflor or lactobacilli containing gel e.g. Lactacyd VG have been tried to restore the normal ecosystem with variable results. Oral probiotics and yogurt have also been tried.

Trichomoniasis Infestation

Unlike Candida, trichomoniasis infestation is a sexually transmitted disease and once noted, the patient should best be screened for other sexually transmitted diseases including syphilis and HIV infection.

The protozoa Trichomonas vaginalis can be found in the vagina, urethra and paraurethral glands. Ten to fifty percent of the patients can be asymptomatic and found on routine pap smear or routine culture for other purposes. The typical symptoms are thin, yellow to greenish offensive discharge and marked signs of inflammation on the vagina and cervix (strawberry appearance). The diagnosis is by wet mount, culture and currently PCR method.
Other than the patient, the partner(s) should be treated. The recommend regimens are
(1) metronidazole 2 gram orally in a single dose
(2) metronidazole 400 to 500 mg twice daily for 5-7 days

Patients should best be rechecked for cure after treatment as incomplete treatment either by the patient and/or her partner(s) can occur. The use of condom can prevent the transmission of trichomonas.

Summary

Though vulvovaginal infections are not causing much severe morbidity, the symptoms like vaginal discharge, itchiness, dyspareunia can affect the patient's social life and sexual life. Prompt investigation and treatment should be provided by the general practitioner and by specialist if needed.

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Chickenpox in Pregnancy

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Background

Chickenpox is due to infection with the varicella zoster virus (VZV), a human alphaherpesvirus found worldwide. It causes varicella (chickenpox) as the primary infection. Afterwards, it establishes latency in the cells of the sensory nerve ganglia and manifests as varicella zoster when it is reactivated. Classically, the clinical disease is a febrile illness with a pruritic vesicular rash. Although many adults are immune, there may be susceptible individuals in the childbearing age. The virus is highly contagious and enters the host through the conjunctivae and mucous membranes of the nasopharynx. Maternal manifestations occur in the second viraemic phase with headache, fever, malaise, followed by pruritus and a maculopapular rash, which turns to vesicular before crusting about 5 days later. The disease is contagious from 2 days before the rash until crusting, and subclinical infections occur. Infection in pregnancy may be associated with significant foetal, perinatal, and maternal morbidity and mortality[1-3].

In Hong Kong, chickenpox is a reportable disease. In 2009 and 2010 there were 6777 and 11617 cases respectively notified, with the median age of infection being 6 years and 81% being children aged below 13, with the majority of cases being in the form of institutional outbreaks[4]. Thus chickenpox is still a highly prevalent disease with an increased incidence observed in the past year with most of the infections occurring in children and adolescents, and susceptible women with exposure to children and adolescents are prone to become infected.

In this review, the foetal and neonatal effects, maternal effects, management in pregnancy, and prevention will be discussed.

A. Foetal and Neonatal Effects of Intrauterine Varicella Infection

In most cases of primary VZV in pregnancy, the timing of intrauterine infection is the major determinant of foetal outcome. In the majority of cases, the foetus is either not infected, or that the foetal infection is controlled without consequences, so that the newborn infant is normal. Even where foetal infection has occurred, the commonest feature is the persistence of IgG at one to two years of age. For most parents and clinicians, the greatest concern is congenital varicella syndrome (CVS) which was first described in 1947, but there are only about 130 cases of CVS reported since[1-3, 5-14]. The relationship between gestation at maternal infection and foetal/neonatal outcome is summarised in Table 1.

Table 1. Gestation at maternal infection and risk on the fetus / infant

Gestation / trimester	Outcome	Incidence
1st – 2nd trimester	Intrauterine infection and Congenital varicella syndrome	25% of primary infection 12% of infected fetuses
2nd trimester to	Vertical transmission	8% by PCR
peripartum period	Intrauterine growth restriction	23%
	Preterm birth	14.3%
	Neonatal chickenpox	Up to 23% of infected neonates
	Neonatal mortality	Up to 7%, higher in preterm (<28 weeks) or <1000g neonates

1. Congenital Varicella Syndrome (CVS)

This arises from infection in the first and second trimesters (up to 28 weeks), but no cases were reported from infection after 28 weeks. However, most of the cases were due to infection before 20 weeks, which could also result in spontaneous abortion, and the overall risk of infection was only 0.91% [1]. In a prospective cohort study, out of 252 women with maternal infection before 20 weeks of pregnancy and completed follow-up, only 2 (0.8%) had confirmed foetal infection, while 1 (0.39%) had confirmed CVS[14]. Of the two foetuses with confirmed intrauterine infection, one was totally asymptomatic and normal up to the age of five years, while the other with CVS had lower limb deformities.

The mortality for affected infants in the first few months of life was 30% and there is a 15% risk of herpes zoster (HZ) between the second and 41st month of life. The mechanism of CVS is thought to be reactivation of VZV in-utero, similar to that of HZ, and the short latency between primary infection and reactivation is thought to be related to the immature foetal cell-mediated immunity. Involvement of CVS is multisystem but there tend to be selective damage on the central nervous system, the eye, the skin, and musculoskeletal systems, which follow the dermatome pattern with segmental involvement of the musculoskeletal and neurological systems, and intrauterine growth restriction (IUGR) is common (Table 2). While the survivors may have long term learning disabilities and developmental problems, neurological development in the asymptomatic children is unaffected.

2. Neonatal Varicella Syndrome

This results from peripartum infection, and may lead to

significant morbidity. The mortality rate could be as high as 31% before the era of VZIG and antiviral treatment, while it could still be as high as 7% now[1-3, 15]. Neonatal chickenpox in the first 10-12 days of life is caused by intrauterine infection. If maternal infection occurs 1-4 weeks before delivery, up to 50% of the infants will be infected, and 23% of these infants will develop clinical chickenpox and manifest with only skin lesions despite maternal transfer of antibodies[15].

Table 2. Multisystem involvement of congenital varicella syndrome

System (incidence)	Lesions
Skin (70%)	Lesions found from head to lower limbs, include cicatricial lesion, cutaneous defects, hypopigmentation; tend to be ipsilateral to other (e.g. eye) manifestations
Limb hypoplasia (46-72%)	Related to muscle hypoplasia from nerve damage, tends to be imsilateral to nerve involvement and skin lesions
Nervous system (48-62%)	Encephalitis, cortical atrophy/porencephaly, hydrocephalus, diffuse white matter gliosis, bulbar palsy, laryngeal paralysis, optic atrophy, seizures, mental retardation, autonomic instability, spinal cord atrophy. Nerve Involvement usually unilateral
Eye (44-52%)	Chorioretinitis, cataracts, microphthalmia, anisocoria, microcornea, hyperplastic primary vitreous. Lesions are unilateral
Gastrointestinal, genital urinary and cardiovascular (7-24%)	Consequent to neurological damage, include gastrointestinal reflux, atresia / immature of colon, anal sphincter insufficiency / faecal incontinence, hydroureter, hydronephrosis, perirenal fibrosis, vesicoureteric reflux, neurogenic bladder
Systemic	Intrauterine growth retardation (frequent), developmental delay

3. Prevention and Follow-up Management

Varicella zoster immunoglobulin (VZIG) is recommended for neonates whose mothers develop the rash from 5 days before to 2 days after delivery. Even though it may not prevent infection, it could reduce the severity of infection, and the neonate should be monitored for 28 days as VZIG may prolong the incubation period. VZIG is also indicated for nonimmune neonates exposed to VZV or HZ in the first 7 days of life from an affected person other than the mother. However, once signs of chickenpox appear, VZIG is no longer effective and treatment with acyclovir should be given instead[1-3, 13, 16].

In at risk but asymptomatic infants, a neonatal ophthalmic examination together with serological testing for IgM at birth and IgG at 7 months of age should be performed.

B.Maternal Effects of Varicella Infection

1. Primary Infection

In the pre-antiviral era, mortality in pregnant women was as high as 20-45%, and pneumonia occurred in 10-20% of pregnant women with chickenpox infection [1-3, 9, 14]. In the prospective series of 252 cases, there was only one case of viral pneumonia requiring hospitalisation and antiviral treatment, while another had preterm birth at 25.9 weeks[14]. However, in women with pneumonia, mechanical ventilation may be required in up to 40%, and current mortality figures are around 3-14%. The risk increases with gestational age, and the proposed explanations include increased maternal immunosuppression and mechanical effects from the enlarging gravid uterus.

2. Herpes Zoster (HZ)

As the enervation of the uterus is from T10 to L4, there is a theoretical risk of intrauterine infection, but no cases of CVS have occurred in women with HZ in the first and second trimesters, or in the perinatal period, probably because the neonates have passive immunity[1-3]. This however does not apply to neonates born before 28 weeks or less than 1000g.

C. Management in Pregnancy

Diagnosis by the various available tests like foetal serum tests (IgM, virology culture, haematological and biochemical tests), ultrasound findings, and amniotic fluid VZV particles by PCR technique have been evaluated[14] and is shown in Table 3.

Table 3. Diagnostic tests for foetal varicella zoster virus infection

Test	Sensitivity	False positive rate	Positive predictive value
Fetal serum biochemistry	50.0	25.1	14.3
Ultrasound findings	66.6	16.1	40.1
Fetal serum IgM	95.5	0.95	75.5
AF viral particles by PCR	99.5	0.03	95.5

After Sanchez et al [14]. Results in %

1. Diagnosis of CVS

(a) After birth, the diagnosis can be made clinically from the combination of maternal history / serology together with the characteristic pattern of lesions in the offspring, while the proof of foetal infection is obtained from the detection of VZV DNA by PCR in the foetus or neonate, specific IgM in cord blood, the persistence of IgG beyond 7 months of life, and the development of HZ during infancy [1-3, 14].

(b) Before birth, the condition may be suspected from detailed ultrasound examination with the finding of features including limb deformities, microcephaly, hydrocephaly, polyhydramnios, soft tissue calcification, and IUGR [1-3].

2. Treatment

(a) Acyclovir, a synthetic nucleoside analogue of guanine, stops replication of human herpes viruses, and is the standard antiviral treatment in this situation. In severe maternal complications and the second half of pregnancy, treatment should be given intravenously at the dose of 10-15 mg/kg body weight every 8 hours for 5-10 days and started within 24-72 hours of rash development. As it crosses the placenta, there is the benefit of inhibiting transplacental transmission. Oral acyclovir has low bioavailability so that it has to be given as 800mg five times daily for 7 days to achieve therapeutic levels, which reduces the duration of symptoms if commenced within 24 hours of rash development. Given within 24-72 hours, it can reduce the

foetomaternal mortality and morbidity. An alternative is valacyclovir, a prodrug of acyclovir with longer half-life and better bioavailability, which can be given in the dose of 1g three times daily. No foetal toxicity or teratogenic effect has been reported with these medications [1-3, 17-19].

(b) Varicella-zoster immunoglobulin (VZIG) can be given after significant exposure to prevent or attenuate the maternal disease, and can be given in combination with acyclovir. It should be given within 72 hours of exposure, the intravenous route being preferable as optimal serum level is achieved more rapidly, but its effectiveness of treatment commencing beyond 96 hours has not been evaluated, and it should be given for up to 10 days[1-3, 18, 19]. It is ineffective and should not be given once clinical illness has developed. The optimal dose is unclear, but the usual recommendation is 125 units / 10kg up to a maximum of 625 units[19], or 1 mg/kg body weight[2]. The duration of VZIG is unknown, but should be at least equal to one half-life of IgG which is 3 weeks, so that subsequent exposure within 3 weeks of a dose may call for additional doses. As it can prolong the incubation period, one more week should be added to the period of surveillance, monitoring and isolation relative to those who have not received VZIG.

(c) Timing of delivery is dependent on the timing of exposure / manifestation of maternal illness and foetal involvement. Around term, delivery should best be carried out 5-7 days after maternal chickenpox to enable passive transfer of immunity to the foetus. Analgesia for labour or anaesthesia for caesarean delivery is preferably provided by epidural anaesthesia, using a site free of cutaneous lesions for needle insertion, as the dura mater is not penetrated.

D. Prevention of Chickenpox in Women of Reproductive Age

To prevent chickenpox infection, a live attenuated varicella vaccine is available, which has been shown to be safe and effective in preventing chickenpox in adults[19]. As a live attenuated vaccine, pregnancy should be avoided for 3 months after vaccination[18]. Where possible, screening should be performed before pregnancy and susceptible individuals should be vaccinated. However, in Hong Kong, there is neither a policy of routine vaccination of all children or susceptible women in the reproductive age, nor routine antenatal screening. Therefore when pregnant women with suspected chickenpox contact are encountered, all would have to be checked for immunity, monitored for clinical manifestation, and urgent treatment may have to be given until maternal immune status is ascertained. In the UK, the current policy is to check immune status post-VZV exposure with VZIG administration where necessary, and which was estimated to be similar in cost to antenatal screening and postpartum vaccination of non-immune mothers, and it was suggested that varicella immunity testing should be included in the antenatal routine screening, either as part of the universal vaccination programme or solely as an antenatal programme[20]. In some countries, such as the USA, universal varicella vaccination for children was implemented since 1995. According to the Varicella Active Surveillance Project from the Centers for Disease Control and Prevention (CDC), there has been a decline in the number of cases, deaths and hospitalisations after introduction of the vaccination over the years, which reflected the benefits of herd immunity with decreasing number of cases of varicella infection in all age groups and decreased social costs[19]. Therefore, this is evidence in support of the merits of universal vaccination. As well, epidemiology may change with time, and population shift and increasing immigration could lead to an age-shift in varicella outbreaks in the future.

In Hong Kong, a study conducted in 2010 on 500 women studied in the first trimester, 56.0%, 14.8% and 29.2% respectively reported a positive history, a negative history, and were uncertain, of previous chickenpox, yet immunity was found in 95.4% overall, which was among the highest figures reported in the literature, with 96.4%, 90.5% and 95.9% respectively of these three groups being tested to be seropositive[21]. Among the 280 women with a history of infection, 91.4% recalled the infection occurring before 13 years of age, with 38.1% before 6 years of age. Of note, while 79.8% were aware of the vaccine, 69.2% of them thought that the vaccine was provided by the government. While 64.2% of the entire cohort understood that the live-attenuated vaccine should not be given during pregnancy, 31.4% were unsure of vaccine safety in pregnancy, and 4.4% thought that the vaccine is safe during pregnancy, and the suboptimal knowledge on the vaccine was probably related to the fact that it is not included in the universal vaccination programme. Therefore clinicians should recommend vaccination in individuals found to be non-immune to varicella.

Conclusion

While the incidence of CVS is low and seroprevalence among the obstetric population appears high in Hong Kong, the problem should not be taken lightly in view of the recent trend of increasing prevalence[4]. Further work should be conducted to evaluate the need for routine vaccination and antenatal screening of women of different age groups and residency status in the obstetric population in order to prevent avoidable cases of CVS and maternal and perinatal mortality that would be encountered in due course, given the unpredictable and uncontrollable flux of pregnant women into Hong Kong for their deliveries.

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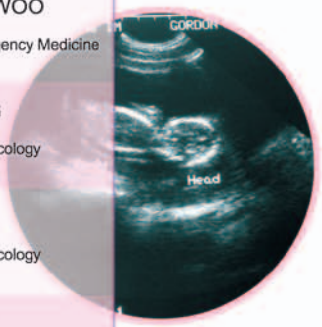

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Dr. Pong-mo YUEN

Postpartum haemorrhage (PPH) or excessive bleeding at or after childbirth is a potentially life-threatening complication and is one of the major contributors to maternal mortality and morbidity worldwide. Primary PPH, defined as bleeding from the genital tract of 500 ml or more in the first 24 hours following the delivery, occurs in 5% to 15% of all deliveries while severe PPH (blood loss >1000 ml) occurs in 1-6%. The most frequent cause for PPH is uterine atony (>50%). Oxytocic agents administered prophylactically during the third stage of labour have been shown to reduce the risk of PPH by about 40%. There is no difference in the risk of PPH, placental retention and use of additional oxytocics when the drug is administered as the anterior shoulder of the baby presents or after delivery of the placenta.

Oxytocin

Oxytocin (Syntocinon®) is the most widely used oxytocics. It has a short half-life, approximately 3–5 minutes, and is used as an infusion to maintain uterine contraction. Oxytocin can be used in a solution or administered intramuscularly, but not orally. It should not be given intravenously as a large bolus as severe hypotension may occur. Because of its anti-diuretic effect, water intoxication can occur with prolonged infusion of oxytocin.

Compared with placebo, prophylactic oxytocin showed a lower incidence of post-partum blood loss >500mL (RR 0.50, 95% CI 0.43-0.59) and less need for therapeutic oxytocics (RR 0.50, 95% CI 0.39-0.64). There was no difference between oxytocin and ergot alkaloids (ergometrine or methylergonovine maleate). However, oxytocin was associated with fewer manual removals of the placenta (RR 0.57; 95% CI 0.41 to 0.79), and with the suggestion of less raised blood pressure (RR 0.53; 95% CI 0.19 to 1.52). The RCOG recommends intravenous oxytocin 5 units (with the option of repeated doses) as the first-line drug treatment for PPH.

Ergot Alkaloids

Ergometrine is the most common ergot alkaloids used. Its half-life is approximately 32 minutes, and it produces long sustained uterine contractions. Administration is most commonly intramuscular, although oral and intravenous administrations are also possible. These drugs are contraindicated in patients with hypertension, migraine, and Raynaud's syndrome. Reported side effects include nausea, vomiting, tinnitus, headache, and increased blood pressure.

Parenteral administration of ergot alkaloid reduced the mean blood loss and the rate of PPH (RR 0.38, 95% CI 0.21-0.69). However, ergot alkaloids increased the risk of vomiting (RR 11.81, 95% CI 1.78 to 78.28), elevation of blood pressure (RR 2.60, 95% CI 1.03 to 6.57) and pain after birth requiring analgesia (RR 2.53, 95% CI 1.34 to 4.78). Oral ergometrine did not show a reduction in PPH when compared to placebo. The available evidence provides no support for the prophylactic use of ergometrine alone.

Syntometrine

Syntometrine is a mixture of 5 IU oxytocin and 0.5 mg ergometrine. It is the most commonly used oxytocics for the prevention and management of post-partum haemorrhage. It is administrated intramuscular and combines the rapid onset of action of oxytocin with the prolonged action of ergometrine. Intravenous administration enhances the side effects of hypertension, nausea and vomiting without the benefit of its sustained action.

Compared with oxytocin, syntometrine was associated with a small reduction in the risk of PPH (OR 0.82, 95% CI 0.71 to 0.95) with no difference in the risk of severe PPH. Syntometrine was also associated with a reduced need for additional oxytocics (OR 0.83, 95% CI 0.72 to 0.96) with no difference in the risk of manual removal of placenta (OR 1.03, 95%CI 0.80 to 1.33). However, syntometrine was more likely to cause adverse effects of vomiting (OR 4.92, 95%CI 4.03 to 6.0), nausea (OR 4.07, 95% CI 3.43 to 4.84) and hypertension (OR 2.40, 95% CI 1.58 to 3.64). Intramuscular syntometrine is an alternative to intravenous ocytocin for the management of PPH.

Misoprostol

Misoprostol is a prostaglandin E1 analog and is registered for the prevention and treatment of gastric ulcers. It is well known for its off-label use as a uterotonic agent. It is available as a 200μg tablet and can be administered orally, vaginally, rectally, sublingually or via the buccal route; the rate and extent of absorption vary between routes. Oral and sublingual routes have the advantage of rapid onset of action, while the sublingual, vaginal and rectal routes result in prolonged activity and greater bioavailability. Side effects include diarrhoea, abdominal pain, nausea and vomiting, shivering and pyrexia.

Compared with conventional oxytocics for prevention of PPH, oral misoprostol was associated with a higher risk of severe PPH (RR 1.32; 95% CI 1.16 to 1.51). There was a trend towards lesser use of additional oxytocics and fewer blood transfusions with misoprostol (RR 0.81; 95% CI 0.64 to 1.02). When combined with oxytocin, oral misoprostol was more effective than placebo and oxytocin in decreasing severe PPH (RR 0.38; 95% CI 0.15 to 0.97), and PPH (RR 0.44; 95%CI 0.23 to 0.84).

When used as a first line treatment for PPH in women who had not received prophylactic oxytocics, fewer women who were given misoprostol had active bleeding controlled within 20 minutes (RR 0.94, 95% CI 0.91 to 0.98) and more had additional blood loss of at least 300 ml (RR 1.78, 95% CI 1.40 to 2.26) when compared with oxytocin. In women who had received prophylactic oxytocin, there was no difference in the 2 outcome parameters after misoprostol or oxytocin. Misoprostol is less effective than oxytocin for prophylaxis of post-partum haemorrhage and has more side effects with no adjunctive effect if the woman has already been given oxytocin.

Carbetocin

Carbetocin is a long-acting synthetic analogue of oxytocin with agonist properties It has a rapid onset of action and a prolonged duration of action relative to oxytocin. It is administered as a single-dose of 100μg either intravenously or intramuscularly. Irrespective of the route of administration, carbetocin produces tetanic uterine contractions within 2 minutes. However, the tetanic contractions last for 11 minutes followed by rhythmic contractions for 120 minutes after intramuscular injection, which are both twice as long when compared with that following intravenous injection (6 minutes and 60 minutes respectively).

When compared with intravenous oxytocin in women delivered vaginally, the use of intramuscular carbetocin resulted in significant reduction in the need for additional oxytocics and uterine massage. When given imtramuscularly, carbetocin was as effective as syntometrine. However, it was associated with a significantly lower incidence of nausea, vomiting, and hypertension, but a significantly higher incidence of tachycardia.

When used in women after Caesarean section, Boucher et al. did not find any difference between intravenous carbetocin and oxytocin while Dansereau et al demonstrated a reduction in the need for additional oxytocics in the carbetocin group (4.7% versus 10.5%, P<0.05). In both studies, a continuous dose of oxytocin was administered after the initial dose, likely improving effectiveness of oxytocin beyond that of a bolus dose alone.

The use of carbetocin resulted in a significant reduction in the need for additional oxytocics agent (RR 0.44, 95% CI 0.25 to 0.78) compared to oxytocin for those who underwent Caesarean section, but not for vaginal delivery.

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Social Networking in a Nutshell

Ms. Elizabeth LEUNG

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This is an age where the world is divided into iPhone and Blackberry users. This is an age where friends can be Facebook friends, but Facebook friends are not necessarily friends. The pace of development of means of social networking today is so stunningly quick that every few months you find yourself faced with new acronyms or coined names that make you wonder, what actually are these things? Truth be told, they are simply more of the same thing. Facebook, Twitter, LinkedIn, and Google+, to name a few, are some of the most popular social networking sites nowadays. If all these seem confusing, perhaps the following trivial event of going to the loo can better illustrate the characteristics of each site:

Twitter: I'm going to the loo…
Facebook: I went to the loo yesterday…
LinkedIn: I'm very good at going to the loo…
Google+: Let's go to the loo together…?

In Mainland China, where most if not all foreign social networking sites are blocked, they have them in their own Chinese version- Weibo, which is akin to Twitter, and Renren, which is the Chinese twin brother of Facebook.

Facebook

It is safe to say that Facebook surpasses all its counterparts as the most used social networking site to date. Launched by Mark Zuckerberg in 2004 at Harvard with the original aim of rating girls, Facebook took internet users by storm within a short period of time. The movie "The Social Network", which you should watch if you haven't already, gives an excellent account of the founding of the website and the subsequent lawsuits between its founders.

On Facebook, each user has their own profile, with their own "wall", on which their friends can write. The best thing about Facebook is that you can snoop around other people's profile without them knowing. Your "Newsfeed" shows you all the updates of your friends' profiles- who is in a relationship with whom, who is tagged in which photos, who wrote on whose wall, who changed their status, who added new photos to their album…

To many youngsters nowadays, their Facebook account pretty much details their whole social life- you see how many Facebook "friends" they have, the photos they are tagged in from parties they have been to, the events they have attended etc. Of course you get perverts who stalk profiles without good intentions. This is where the security settings come into play. You can forbid people other than your friends from viewing your wall, or your photos, or your information, or all of the above.

Apart from writing on each other's wall, Facebook users can also "inbox" each other, and send instant messages on "Facebook chat". They can also interact with each other in Facebook games. Some popular ones include Texas Hold'em Poker, Restaurant City, and Millionaire.

Although originally meant for college students only, Facebook users have expanded to a much wider range- Many a time, you see stylish parents (or even grandparents!) being "friends" with their kids on Facebook and leaving endearing comments on their walls. If you have lost contact with an old friend, try Facebook, because chances are, he has got a Facebook as well!

Twitter

Twitter has gained wide popularity ever since it was launched in 2006, when the concept of micro-blogging was relatively new. A microblog, usually a short sentence with or without a photo, on Twitter is called a "tweet". Users can follow other users to receive updates of their tweets. Each user's Twitter page consists of all the tweets they have written. With a word limit of 140 words per tweet, Twitter is an easy and quick way to update your friends with what you are doing and your current thoughts. It is an alternative to traditional blogging.

On Twitter, users can interact directly with heads of governments, celebrities, and all sorts of public figures. If lucky, you may get a reply from them!

LinkedIn

If Facebook and Twitter are not to your taste, then perhaps LinkedIn would appeal to you. Geared towards working professions, LinkedIn is used for maintaining professional relationships. LinkedIn users can establish a contact network consisting of "connections", which can then be used to find jobs and business opportunities. Users can invite anyone to be a connection, but this connection cannot be established if the recipient of invitation selects "I don't know".

LinkedIn recently launched a new feature enabling users to apply for jobs directly on the site, using their profiles as resumes. In short, LinkedIn is an ideal networking site for any aspiring professional.

Up and coming: Google+

Launched in late June this year, Google+ (pronounced Google Plus) has the ambition to take over Facebook as the most prominent social networking site. Whether this will materialise remains to be seen, but even in its "field testing" phase where registration is by invitation only, Google+ has attracted a sizeable amount of users. To date, this site remains by invitation only.

Google+ offers fresh features different from typical social networking sites and is able to offer video conferencing functions, and to integrate with Android, iPhone and SMS devices to provide instant messaging service. "Circle" on Google+ replaces the traditional friends list on most social networking sites, allowing users to create different friends circles, while "Hangout" enables users to video calls with up to 10 people within a circle. Google+ is also integrated with other Google applications such as Gmail and Google docs. Sounds promising?

Renren - The Chinese Facebook?

Previously known as Xiaonei (inside school), this site renamed itself Renren (everybody) a few years ago to widen the scope of its users. It is common knowledge that Facebook and most other such social networking sites are blocked in Mainland China- No worries, there's Renren (and "leaping over the wall", of course). The claim that Renren is China's Facebook is not at all unfounded. Anyone who has a Renren account will have noticed its stark resemblance to Facebook. Its colour scheme, interface and features are largely akin to Facebook's, with one important exception- visiting others' profiles leaves a footprint, which curbs stalking to some extent. This is a feature that Facebook is determined not to adopt.

Renren's users are predominantly Mainland Chinese, but it is not rare for Chinese from Hong Kong or other Chinese-speaking countries to join.

Weibo - China's Twitter?

Sina Weibo, commonly known as Weibo, literally means microblogging. Started three years ago, it has already gained a huge following, saturating China's microblogging market. Weibo has similar functions as Twitter and, just like Twitter, it is widely used by Chinese celebrities and other public figures. It's not just Chinese celebrities either, some Western celebrities who have an eye on the vast Chinese market have got themselves a Weibo- Radiohead, Suede, Emma Watson have all been spotted on Weibo.

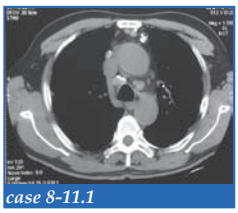
Conclusion

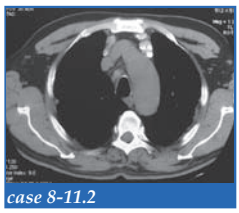
Although their features may differ, all of these sites essentially seek to help people maintain connections with people around, or not around them. As the Chinese saying goes, "vegetables or radish, to each their own". With such a great array of social networking sites, there is most likely one that suits your needs. But if not, you can never go wrong with the traditional way of socialising- pick up the phone, or meet in person!

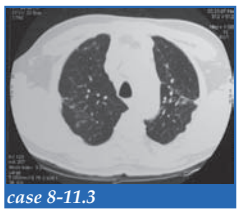
Radiology Quiz

Dr. Andrew LAI

Department of Radiology, Queen Mary Hospital


case 8-11.1


case 8-11.2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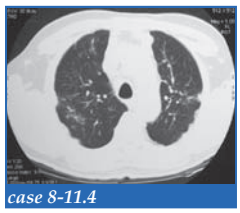
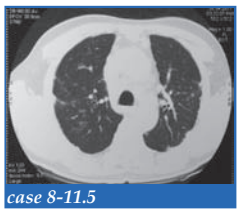

case 8-11.4


case 8-11.5

Questions:

Middle age man, chronic smoker.
Found to have abnormal opacity on CXR.
CT thorax performed.

Questions:

1) What are the radiological findings?
2) What is the diagnosis or differential diagnoses?
3) Any relevant history that you would like to obtain?

(See P.37 for answers)

The Federation Annual Dinner 2011

31st December, 2011 (Sat)

Run Run Shaw Hall
The Hong Kong Academy of Medicine Jockey Club Building

Performers of the evening: Ms. Suzan Guterres & Mr. Howard McCrary

Enjoy an Elegant & Chic New Year's Eve Celebration with our Federation's Friends !

Book your tickets now **($1,000 HKD per person)**

- **Free Raffle Tickets for Early Bird before Oct 31**
- **Top Raffle Prizes include Cathay Pacific air tickets & Swire Travel travel coupons**
- **Gaming tables for charity**

Call the Federation Secretariat on 2527-8898 to reserve your tables !

Ms. Suzan Guterres 蘇姍小姐- one of the most glamorous and gorgeous stars of our very own Hong Kong's entertainment industry, and has recently released her fabulous audiophile "Colors of Suzan".

Mr. Howard McCrary - The renowned , award wining singer, songwriter, producer , and also a Grammy Award nominee, who has worked with some of the US 's most prestigious Artistes such as Quincy Jones, Michael Jackson, Chaka Khan, Edwin Hawkins to name a few.

THE FEDERATION OF MEDICAL SOCIETIES OF HONG KONG

香 港 醫 學 組 織 聯 會

Central & Western Health Festival 2011/2012

The HKFMS Foundation was glad to take part in the Central & Western Health Festival again this year on Sept 10 & 11, 2011 at the Smithfield Sport Centre, Western District.

With the great support from our member societies, we successfully held 4 booths on Lung Function Screening (HK Thoracic Society and American College of Chest Physicians (HK and Macau Chapter) Ltd.), Lung Health Exercise & Elderly Health Exercise (HK Occupational Therapy Association), Eye Examination (HK Optometric Association), Dental Checking (HK Dental Association), and Home Hospital Station (LKang) and 4 seminars on Pediatrics Epilepsy (The HK Society of Child Neurology and Developmental Paediatrics), Common Eye Problems (HK Ophthalmological Society), Common BPH Problems (HK Urological Association) and Safety Drugs Usage (The Pharmaceutical Distributors Association of HK).

We would like to express our sincere thanks to the above member societies, the speakers - Dr Wai-kwong CHAK, Dr Nancy YUEN, Dr Ming-kwong YIU and Dr Keary ZHOU and our sponsors ABenefits, Allergan, Colgate, LKang, Mekim, Oral B, Skyview Optical and International Medical.

Looking forward to seeing you at the Central & Western Health Festival 2012!

Public Talk

On Aug 28, 2011, the Federation successfully held its second public talk on common ophthalmological problems and latest treatments. During the talk, our guest speakers Dr Nancy Yuen and Dr Vincent Lee happily shared much valuable information with around one hundred audience from the public. The Federation would like to express our gratitude to the speakers and also the sponsor Allergan Asia Ltd. (Hong Kong).

CME / CNE Course | Course No. C182

Certificate Course on Sports Medicine and Emergencies

The Federation of Medical Societies of Hong Kong

Hong Kong Society for Emergency Medicine and Surgery

7 Nov 2011

Topic : Introduction to Sports Medicine and common injuries in contact sports

Speaker : Dr. Kenneth Wing-cheung WU
Associate Consultant,
Accident and Emergency Department,
Queen Elizabeth Hospital

14 Nov 2011

Topic : Common lower limb injury in endurance sport, An Emergency Medicine perspective

Speaker : Dr. Man-kam HO
Associate Consultant,
Accident and Emergency Department,
North District Hospital

21 Nov 2011

Topic : Emergencies in Aquatic Sports

Speaker : Dr. Kwan-leong AU YEUNG
Specialist Resident,
Accident and Emergency Department,
Queen Elizabeth Hospital

28 Nov 2011

Topic : Musculoskeletal injuries and wound management

Speaker : Mr. Chi-yip WONG
Registered Nurse,
Accident and Emergency Department,
Queen Elizabeth Hospital

5 Dec 2011

Topic : Medical emergency in sporting ground

Speaker : Dr. Willis KWOK
Medical Officer,
Accident and Emergency Department,
Yan Chai Hospital

12 Dec 2011

Topic : Theory and practical tips for weight training

Speaker : Dr. Ben Siu-pan NG
Specialist Resident,
Accident and Emergency Department,
United Christian Hospital

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

CME/CNE Course | Course No. C185

Certificate Course on Wilderness Medicine for Healthcare Professionals 2011

Jointly organised by

The Federation of Medical Societies of Hong Kong

Hong Kong Society for Emergency Medicine and Surgery

Date	Topics	Speakers
3 Nov 2011	Introduction to Wilderness Medicine 野外醫學介紹 Heat Stroke, Heat Exhaustion and Hypothermia 高溫及低溫症	Dr. Peter CHEE 池丕恩醫生 急症醫學專科醫生
10 Nov 2011	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
24 Nov 2011	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、脫水及雷擊	Dr. Yuet-chung SIU 蕭粵中醫生 急症醫學專科醫生
1 Dec 2011	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
8 Dec 2011	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
15 Dec 2011	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. Wing-keung WOO 胡永強醫生 急症醫學專科醫生 香港飛行服務隊高級航空醫生

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)
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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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						★Amazing Vaccines Exhibition (以「疫」制「疫」— 神奇疫苗展覽) ★HKMA Hong Kong Bench Press Championship 2011 **1**
★HKMA Tennis Tournament **2**	★Bilateral Hydronephrosis **3**	★FMSHK Officers' Meeting ★HKMA Council Meeting **4**	**5**	**6**	★Joint Surgical Symposium - Advanced Minimally Invasive Colorectal Surgery **7**	★HKMA CME – 1) Community Treatment Order for Severe Mental Illness – Do We Need One in Hong Kong? 2) Introduction to Medical Hypnosis ★HKMA CME – Enhancing Diabetes Management in Primary Care ★HKMA Refresher Course for Health Care Providers 2011/2012 **8**
★HKMA Tennis Tournament ★HKMA Swimming Gala 2011 ★HKMA Certificate Course on Family Medicine 2011 **9**	**10**	★PALS Course 2011 **11**	★Hong Kong Neurosurgical Society Monthly Academic Meeting – Discogenic Back Pain ★HKMA Central, Western & Southern Community Network –Certificate Course on Urology (Session 6) ★HKMA - World Medical Assembly in Montevideo **12**	★HKMA Kln East Community Network – Certificate Course on Allergic Rhinitis & Asthma (Session 1) ★HKMA - World Medical Assembly in Montevideo ★HKMA YTM Community Network – Recent Advance and Practical Management on Allergic Rhinitis ★HKMA HKE Community Network – Management of Insomnia and the Use of Hypnotic Medication ★HKMA NTW Community Network – Quadrivalent HPV Vaccine: The Extra Benefits ★HKMA Structured CME Programme with Hong Kong Sanatorium & Hospital Year 2011 – Update on Treatment of Type 2 DM **13**	★HKMA - World Medical Assembly in Montevideo **14**	★HKMA - World Medical Assembly in Montevideo ★HKMA CME – Skin and Infectious Diseases ★HKMA CME – Enhancing Diabetes Management in Primary Care **15**
★HKMA Tennis Tournament **16**	**17**	★HKMA Eye Course – Updates on Paediatric Ophthalmology ★FMSHK Executive Committee Meeting **18**	**19**	★HKMA NTW Community Network –Hormonal Contraceptives in General Practice **20**	**21**	★HKMA YTMCN and Kowloon Central Cluster – Certificate Course on Bringing Better Health to Our Community (Lecture 5) ★HKMA - The 13th Beijing / Hong Kong Medical Exchange **22**
★HKMA Tennis Tournament ★HKMA - The 13th Beijing / Hong Kong Medical Exchange ★HKMA - Action for Your Health Campaign (TBC) ★HKMA Ten-pin Bowling Team Practice Session **23**	**24**		★HKMA - ADHD-Assessment and Management in Child and Adolescent **26**	★HKMA Kln East Community Network - Certificate Course on Allergic Rhinitis & Asthma (Session2) ★HKFMS Foundation Meeting ★Acne – Integrative Approach: Myths & Controversies (暗瘡 – 中西醫處理方法及謬誤) **27**	**28**	★HKMA – KLN East Community Network; HA – UCH; HKCFP - CME Course for Health Personnel 2011 ★4th Joint Scientific Meeting of The Royal College of Radiologists & Hong Kong College of Radiologists and 19th Annual Scientific Meeting of Hong Kong College of Radiologists **29**
★HKMA Tennis Tournament ★HKMA Ten-pin Bowling Team Practice Session ★4th Joint Scientific Meeting of The Royal College of Radiologists & Hong Kong College of Radiologists and 19th Annual Scientific Meeting of Hong Kong College of Radiologists ★HKMA Joint Professional Cooking Competition 2011 **30**	**31**	**25**				

Date / Time	Function	Enquiry / Remarks
(1/10/2011 – 3/6/2011) *Tue - Sat: 10 am – 5 pm* *Sun & Public Holidays: 1 pm – 5pm* *(Closed on Mon)* **1 SAT** 11:00 am	**Amazing Vaccines Exhibition (以「疫」制「疫」— 神奇疫苗展覽)** Organiser: Hong Kong Museum of Medical Sciences, Venue: Hong Kong Museum of Medical Sciences **HKMA Hong Kong Bench Press Championship 2011** Organiser: The Hong Kong Medical Association Power-lifting Team, Chairman: Dr. Wing-yuk IP, Venue: Cheung Sha Wan Sports Centre	Secretariat Tel: 2549 5123 Fax: 2559 9458 Email: info@hkmms.org.hk Miss Sharon HUNG / Ms. Dorothy KWOK Tel: 2527 8285
2 SUN *(9,16,23,30)*	**HKMA Tennis Tournament** Organiser: The Hong Kong Medical Association, Venue: Kowloon Tong Club	Miss Alice TANG / Miss Sharon HUNG Tel: 2527 8285
3 MON 7:30 pm – 8:30 pm	**Bilateral Hydronephrosis** Organiser: Hong Kong Urological Association, Chairman: Dr. James Cheuk-man LI, Speaker: Dr. Kenneth Kai-fung CHAU, Venue: Multi-disciplinary Simulation and Skills Centre, 4/F, Block F, Queen Elizabeth Hospital, Kowloon	Dr. Hing-hoi HUNG / Ms. Tammy HUNG Tel: 2958 6006 / 9609 6064 Fax: 2958 6076 / 8344 5115
4 TUE 8:00 pm – 10:00 pm	**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
8:00 pm	**HKMA Council Meeting** Oganiser: The Hong Kong Medical Association, Chairman: Dr. Kin CHOI, Venue: HKMA Head Office, 5/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Ms. Christine WONG Tel: 2527 8285
7 FRI 8:00 am – 9:00 am	**Joint Surgical Symposium - Advanced Minimally Invasive Colorectal Surgery** Organisers: Department of Surgery, The University of Hong Kong & Hong Kong Sanatorium & Hospital, Speakers: Dr. Joe FAN & Dr. Jensen POON, Venue: Hong Kong Sanatorium & Hospital	Department of Surgery, Hong Kong Sanatorium Hospital Tel: 2835 8698 Fax: 2892 7511 1 CME Point (Active)
8 SAT 12:45 pm	**HKMA CME – 1) Community Treatment Order for Severe Mental Illness – Do We Need One in Hong Kong? 2) Introduction to Medical Hypnosis** Organiser: The Hong Kong Medical Association, Chairman: Dr. Kin CHOI & Prof. Shiu-hung LEE, Speakers: Dr. Roger Man-kin NG & Dr. Ling CHU, Venue: Kowloon Hospital	Mrs. Bianca LEE Tel: 3129 6167 2 CME Points
1:00 pm *(15)*	**HKMA CME – Enhancing Diabetes Management in Primary Care** Organiser: The Hong Kong Medical Association, Chairman: Dr. Chung-ping HO, Speakers: Various, Venue: Tsim Sha Tsui, Kowloon	Ms. Idy CHEUNG (Tel: 2155 8573) / HKMA CME Department (Tel: 2527 8452) 2 CME Points
2:30 pm	**HKMA Refresher Course for Health Care Providers 2011/2012** Organiser: The Hong Kong Medical Association, Speaker: Dr. Sui I CHU, Venue: OLMH	Ms. Clara TSANG Tel: 2354 2440 2 CME Points
9 SUN 1:00 pm	**HKMA Swimming Gala 2011** Organiser: The Hong Kong Medical Association, Venue: Swimming Pool, HK Poly U	Miss Alice TANG / Miss Sharon HUNG Tel: 2527 8285
2:00 pm	**HKMA Certificate Course on Family Medicine 2011** Organiser: The Hong Kong Medical Association, Speakers: Dr. Gabriel Kin CHOI & Dr. Amy Lai-man PANG, Venue: Queen Elizabeth Hospital	HKMA CME Department Tel: 2527 8452 3 CME Points
11 TUE *(12,13,14)*	**PALS Course 2011** Organisers: Hong Kong College of Paediatricians, the Heart Institute for Children, Hope Children's Hospital, Illinois, USA & Hong Kong Paediatric Nurses Association, Speakers: Various, Venue: A & E Training Centre, Tang Shiu Kin Hospital	Ms. Kitty HO/Vanessa WONG Tel: 2871 8769 Fax: 2785 1850 Email: enquiry@paediatrician.org.hk Website: http://www.paediatrician.org.hk/entcnews.htm 12 CME Points
12 WED 7:30 am	**Hong Kong Neurosurgical Society Monthly Academic Meeting – Discogenic Back Pain** Organiser: Hong Kong Neurosurgical Society, Chairman: Dr. Wai-man HUNG, Speaker: Dr. Derek WONG, Venue: Seminar Room, G/F, Block A, Queen Elizabeth Hospital	Dr. Gilberto LEUNG Tel: 2255 3368 Fax: 2818 4350 1.5 CME Points
1:00 pm	**HKMA Central, Western & Southern Community Network – Certificate Course on Urology (Session 6)** Organiser: HKMA Central, Western & Southern Community Network, Chairman: Dr. Ping-yin YIK, Speaker: Dr. Simon Sai-man CHU, Venue: The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Mr. Alan LAW Tel: 2527 8285 1 CME Point
(13,14,15)	**HKMA - World Medical Assembly in Montevideo** Organiser: The Hong Kong Medical Association, Venue: Uruguay	Secretariat Tel: 2527 8285
13 THU 1:00 pm	**HKMA Kln East Community Network – Certificate Course on Allergic Rhinitis & Asthma (Session 1)** Organiser: HKMA Kln East Community Network, Chairman: Dr. Ka-kui AU, Speaker: Dr. Eligina Yee-ling POON, Venue: Lei Garden, Kwun Tong, Kowloon	Mr. Alan LAW Tel: 2527 8285
1:00 pm	**HKMA YTM Community Network – Recent Advance and Practical Management on Allergic Rhinitis** Organiser: HKMA YTM Community Network, Speaker: Dr. Chun-kuen CHOW, Venue: Eaton Smart, Hong Kong, 380 Nathan Road, Kowloon	Miss Candice TONG Tel: 2527 8285
1:00 pm	**HKMA HKE Community Network – Management of Insomnia and the Use of Hypnotic Medication** Organiser: HKE Community Network, Chairman: Dr. Henry Wing-ming KONG, Speaker: Dr. Fu-yin TUNG, Venue: HKMA Head Office, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Miss Candice TONG Tel: 2527 8285 1 CME Point
1:00 pm	**HKMA NTW Community Network – Quadrivalent HPV Vaccine: The Extra Benefits** Organiser: HKMA NTW Community Network, Speaker: Dr. Nelson Shing-shun SIU, Venue: Maxim's Palace, Yuen Long	Mr. Alan LAW Tel: 2527 8285 1 CME Point
2:00 pm	**HKMA Structured CME Programme with Hong Kong Sanatorium & Hospital Year 2011 – Update on Treatment of Type 2 DM** Organiser: The Hong Kong Medical Association, Chairman: Dr. Kin-lun TSANG, Speaker: Dr. Elaine YL TSUI, Venue: The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F., Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Department Tel: 2527 8452 1 CME Point

Date / Time	Function	Enquiry / Remarks
15 SAT 1:30 pm	**HKMA CME – Skin and Infectious Diseases** Organiser: The Hong Kong Medical Association, Chairman: Dr. Kin CHOI, Dr. Raymond Wai-hung YUNG, Speakers: Various, Venue: Princess Margaret Hospital, Kowloon	HKMA CME Department Tel: 2527 8452 2.5 CME Points
18 TUE 1:15 pm	**HKMA Eye Course – Updates on Paediatric Ophthalmology** Organiser: The Hong Kong Medical Association, Chairman: Dr. Patrick Pak-chuen TONG, Speaker: Dr. Charmaine HON, Venue: The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Department Tel: 2527 8452 1 CME Point
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
20 THU 1:00 pm	**HKMA NTW Community Network –Hormonal Contraceptives in General Practice** Organiser: HKMA NTW Community Network, Speaker: Dr. Tai-wah LAU, Venue: Maxim's Palace, Yuen Long, New Territories	Mr. Alan LAW Tel: 2527 8285 1 CME Point
22 SAT 1:00 pm	**HKMA YTMCN and Kowloon Central Cluster – Certificate Course on Bringing Better Health to Our Community (Lecture 5)** Organiser: HKMA YTMCN and Kowloon Central Cluster, Speakers: Dr. Chung-ping HO & Dr. Kingsley Hau-ngai CHAN, Venue: Block M, Lecture Theatre, Queen Elizabeth Hospital, 30 Gascoigne Road, Kowloon	Miss Candice TONG Tel: 2527 8285
(23)	**HKMA - The 13th Beijing / Hong Kong Medical Exchange** Organiser: The Hong Kong Medical Association, Chairmen: Dr. Pak-chin CHOW & Dr. Sum-wo LI, Speakers: Various, Venue: Wenzhou	Ms. Candy YUEN Tel: 2527 8285 CME Point: 5 (22/10); 3 (23/10)
23 SUN 1:15 pm	**HKMA - Action for Your Health Campaign (TBC)** Organiser: The Hong Kong Medical Association, Venue: HAHO	Miss Candice TONG Tel: 2527 8285
2:00 pm *(30)*	**HKMA Ten-pin Bowling Team Practice Session** Organiser: The Hong Kong Medical Association, Venue: Mei Foo Bowling World	Miss Alice TANG / Miss Sharon HUNG Tel: 2527 8285
26 WED 1:00 pm	**HKMA - ADHD-Assessment and Management in Child and Adolescent** Organiser: HKMA – CW&S Community Network, Chairman: Dr. Ping-yin YIK, Speaker: Dr. Anna Kit-sum LAM, Venue: The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F., Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Mr. Alan LAW Tel: 2527 8285
27 THU 1:00 pm	**HKMA Kln East Community Network - Certificate Course on Allergic Rhinitis & Asthma (Session2)** Organiser: HKMA Kln East Community Network, Chairman: Dr. Ka-kui AU, Speaker: Dr. Talen Kin-hang WAI, Venue: Lei Garden, Kwun Tong, Kowloon	Mr. Alan LAW Tel:2527 8285
8:00 pm – 10:00 pm	**HKFMS Foundation Meeting** Organiser: HKFMS Foundation Limited, Venue: Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong	Ms. Sonia CHEUNG Tel: 2527 8898 Fax: 2865 0345
7:00 pm – 10:00 pm	**Acne – Integrative Approach: Myths & Controversies (暗瘡 – 中西醫處理方法及謬誤)** Organiser: Association for Integrative Aesthetic Medicine, Hong Kong, Chairman: Dr. Ka-lam HAU, Speaker: Prof. Feili HUANG, Dr.Chi-kong OR & Dr. King-man HO, Venue: 2/F, Chinese Club Building, 21-22 Connaught Road Central, Central, Hong Kong	Miss Echo LEUNG Tel: 3575 8600 Fax: 2301 2414 CME/CNE accreditation are under application
29 SAT 1:30 pm	**HKMA – KLN East Community Network; HA – UCH; HKCFP - CME Course for Health Personnel 2011** Organiser: HKMA – KLN East Community Network, Chairman: Dr. David Vai-kiong CHAO, Speakers: Dr. Yan-kit LAU & Dr. Wing-leung CHAN, Venue: UCH	Mr. Alan LAW Tel: 2527 8285 1.5 CME Points
(30)	**4th Joint Scientific Meeting of The Royal College of Radiologists & Hong Kong College of Radiologists and 19th Annual Scientific Meeting of Hong Kong College of Radiologists** Organisers: The Royal College of Radiologists & Hong Kong College of Radiologists, Venue: Hong Kong Academy of Medicine Jockey Club Building, 99 Wong Chuk Hang Road, Aberdeen, Hong Kong	Secretariat Tel: 2871 8788 Fax: 2554 0739 Email: enquiries@hkcr.org Website: http://www.hkcr.org
30 SUN	**HKMA Joint Professional Cooking Competition 2011** Organiser: The Hong Kong Medical Association, Venue: Towngas, Leighton Centre	Miss Alice TANG; Miss Sharon HUNG Tel: 2527 8285

Course / Meeting

11/11/2011	**Hong Kong Psychogeriatric Association and International Psychogeriatric Association Joint Program - Workshop on Testamentary Capacity and Other Types of Mental Capacities** Organisers: Hong Kong Psychogeriatric Association & International Psychogeriatric Association, Speakers: Prof. Robin JACOBY; Dr. Hung-kin CHEUNG & Dr. Victor LUI, Venue: Thornton & Huthart Room I, 3/F, South Tower, YMCA of Hong Kong, Tsim Sha Tsui, Kowloon, Enquiry: Ms. Paulina Po-ling CHOW, Email: info@hkpga.org
14/1/2012	**Hong Kong Surgical Forum – Winter 2012** Organiser: Department of Surgery, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Queen Mary Hospital & Hong Kong Chapter of American College of Surgeons, Venue: Underground Lecture Theatre, New Clinical Building, Queen Mary Hospital, Pokfulam, Hong Kong, Registration & Enquiry: Forum Secretary, Hong Kong Surgical Forum, Tel: (852) 2819 9691 / (852) 2819 9692, Fax: (852) 2818 9249, E-mail: hksf@hku.hk, Web-site: http://www3.hku.hk/surgery/forum.php

Answer to Radiology Quiz

1) Multiple subcentimetre nodules with upper lobe predominance. Upper lobe fibrosis but no evidence of progressive massive fibrosis. Eggshell calcification in anterior and hilar lymph nodes.

2) Diagnosis: Silicosis. Ddx: Sarcoidosis, Miliary TB

3) Any previous occupation exposure to crystalline silica (quartz) or silicon dioxide from mining of coal, graphite or iron. Previous occupation in sand blasting, iron/steel foundry workers, ceramic workers or tunnelling.

Silicosis pathophysiology: silica ingested by macrophages, breakdown of macrophage releases enzymes with produce fibrogenic response. The natural history requires 10-20 years exposure before XRay appearance. Association with TB is commonly seen.

Dr. Andrew LAI
Department of Radiology, Queen Mary Hospital

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Smart Choice

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The **ONLY** HPV Vaccine registered at the **Hong Kong Department of Health** for use in

Females aged

9-45

years

&

Males aged 9-26 **years**

GARDASIL®

The ONLY 4 in 1 **HPV vaccine**

helps protect against

Cervical cancer **Vulvar Cancer**

Vaginal Cancer **Genital Warts**

caused by HPV 6, 11, 16, 18

Selected Safety Information:

- GARDASIL is indicated in 9 - 45 years old girls and women for the prevention of cervical, vulvar, and vaginal cancers; precancerous or dysplastic lesions and genital warts caused by HPV Types 6, 11, 16 and 18. It is also indicated in boys and men from the age of 9 through 26 years for the prevention of genital warts (condyloma acuminata) caused by HPV types 6 and 11. It should be administered intramuscularly as 3 separate doses over a 6-month period. It is contraindicated in individuals with hypersensitivity to any vaccine ingredients or after a previous dose of GARDASIL. It is not recommended for pregnant women and pregnancy should be avoided during the vaccination period. This vaccine will not protect against diseases that are not caused by HPV and is not intended to be used for treatment of active genital warts; cervical, vulvar, or vaginal cancers; CIN, VIN, or VaIN. Routine cervical screening should be continued. Vaccinees should be carefully observed for approximately 15 minutes after administration of GARDASIL.
- Common adverse reaction in clinical trials were: headache, dizziness, nausea, pain in extremity, pyrexia, injection site reactions: erythema, pain & swelling; pruritus & hematoma which were mild to moderate. Postmarketing reports: dizziness, headache, syncope, nausea & vomiting, arthralgia, asthenia, lymphadenopathy, urticaria etc.

References: IMS 2006 - 2011 (Q1), Hong Kong Product Circular (Gardasil, MSD)

Please consult the full prescribing information for details.

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