

NewsLetter

院訊

Update on *Management of* *Rheumatoid Arthritis*



Hospital Updates:

- Just How Friendly are These Beta-Lactams?
- New Drugs Available at SPH



Message from

Managing Director

Ring out the old, ringing in the new, the Year of the Goat has finally come. I wish you all a vibrant and blissful new year! At this seasonal festival, let us embark on a journey of love through the following story to experience how meaningful one's life could be.

The story begins with the videotaping of a "true man show" by a California man who set out to see what a homeless man would do with a cash donation of \$100. The male lead of this story was known as Thomas, a street beggar being secretly followed by the filmmaker near a liquor store after the latter had handed him the cash. Not surprisingly, Thomas went straight into the liquor store as the filmmaker expected. When the filmmaker believed he got the result he had, no one was more surprised than him at what eventually transpired.

Instead of enjoying himself with a bottle of wine, Thomas went in to buy food and then went straight to a park to hand out the offerings to the other homeless people over there. His good deed touched the heart of the filmmaker. Thomas, as a man in need, demonstrated what God has long been teaching us: love is unselfish; love is to share and care. The essence of love lies in every single one of us, regardless of wealth, gender, age or race. As long as we are willing to help, a small step of ours can make a big difference to others.

As the well-known saying goes, "it is more blessed to give than to receive". St. Paul's Hospital has been endeavoring to render assistance to those in need. We have been organizing outreach activities to help the socially disadvantaged such as low income groups and ethnic minorities. We do not only aim to provide them with free health check services and informative talks, we also wish to encourage more people to participate in the voluntary work. I am so delighted to see that the seeds of love are scattered at the every corner here, and that our hospital staff are devoted to helping the needy. Taking this opportunity, I would like to express my heartfelt gratitude to all of my hospital staff for their effort and contribution in making the outreach activities a success. Your continued support to the voluntary services of the Hospital would be highly appreciated.

Once again, I wish you a happy Chinese New Year. May God bless you and your family with good health and joy in the year ahead.

Sr. Nancy Cheung



MESSAGE

FROM THE MEDICAL SUPERINTENDENT



Dr. William Ho
Medical Superintendent

By the time this issue of SPH Newsletter is out, the government's two consultation exercises on Voluntary Health Insurance Scheme and Regulation of Private Healthcare Facilities will be well underway.

It is laudable that the present Administration is taking up these two big issues at the same time. The debate on healthcare financing in Hong Kong has gone on for more than 20 years. Secretary for Health and Welfare Mrs. Elizabeth Wong made an initial attempt with her "rainbow document" *Towards Better Health* in 1993. Then came the *Harvard Report* in 1999 that advocated social insurance. In 2000, the then Secretary Dr. EK Yeoh published *Lifelong Investment in Health*, advocating compulsory savings. A decade later in 2010, the succeeding Secretary Dr. York Chow put out his version of Health protection Scheme in *My Health My Choice*. Whatever the proposal, public opinion was often divided, if not outright opposing. Meanwhile, our healthcare system witnessed ups and downs - rapid growth of the Hospital Authority, setback during the Asian Economy Crisis and then SARS, and revival of the private sector especially with the Mainland mothers coming for delivery, only followed by abrupt cessation. I am sure Dr. Ko had carefully considered all these when he finally distilled his version of the proposed Voluntary Health Insurance Scheme (VHIS).

Politically speaking, a voluntary scheme is more palatable. The question is whether there are enough participants to make the scheme a meaningful one, which in turns depends on the scheme's attractiveness. As proposed, there will be a roughly 10% increase in premium for the "Standard Plan" compared with market price. In return, the advantages include guaranteed acceptance and renewal, coverage on pre-existing conditions, prescribed benefit limits, no cost-sharing by patient except for advanced diagnostic tests, coverage for cancer and so on. There is also a ceiling to premium level for poor risk individuals, beyond which the government will take up the excess through a High Risk Pool. These features are no doubt attractive for those who are currently refused by insurance companies, or elderly/high risk patients who find the insurance premium quotes too high to bear. Government probably believes that currently these patients are using the public healthcare services any way, and paying \$100 per day for acute hospital admissions. If they join the VHIS and pay up a premium of up to the ceiling of 3X the standard \$3,600 (for example), that still represents \$10,800 collected per annum.

The question is whether voluntary insurance will inflate total demand, and how many "good risk" individuals are contributing to the insurance pool.

So far the Hong Kong Private Hospitals Association (HKPHA) seems to be the only voice that publicly welcomes the scheme, as expanded private insurance coverage makes private care more affordable to individuals. As expected, the insurance industry does not want more regulation. Among others, there are certainly no shortage of skeptics. In any case, there will still be a long drawn process of going through public consultation, the legislative procedure, funding and staffing the new administrative setup, and finally launching the scheme. Changes may be inevitable along the way.

The other consultation paper on Regulation of Private Healthcare Facilities is more straight-forward. Riding on previous Director of Audit reports, the government is proposing a series of regulatory tightening. These include the Department of Health's power, price transparency, corporate and clinical governance, quality assurance, facilities standards, and penalties. I sat in the government's working group, and noted that the majority of time was spent on price transparency, an area that the non-medical members had the most opinion on. Unfortunately, the term "package price" may mean different things for different people. And for private hospitals in Hong Kong where most inpatients are from Visiting Doctors, there is huge variation in individual practices and choice of consumables, leading to huge variation in hospital charges payable by the patient for the same disease/procedure, not to mention the doctors' own fees. Over-simplification makes political sense but may not be actually helping patients much. The HKPHA is endeavoring to clarify concepts and map out a practical way forward.

The coming few years will see significant expansion of private beds by virtue of hospital expansion projects as well as new hospitals. There will be keen competition for both customers and skilled staff. Here in St. Paul's Hospital we will embrace the opportunities and challenges ahead, while continuing to improve our efficiency and quality of care for the benefit of patients and the community we serve.



Dr. Chan Pak To
Specialist in Rheumatology
St. Paul's Hospital

Update on Management of Rheumatoid Arthritis

Rheumatoid arthritis (RA) is a chronic autoimmune disease that causes pain, stiffness, swelling and limited motion and function to multiple joints. Small joints in hands and feet are more commonly affected. It is estimated to affect 1% of the population globally¹.

Contemporary RA management emphasizes early diagnosis and early aggressive management. This approach aims to improve patient functioning and quality of life, reduce comorbid conditions, prevent radiographic progression, and enhance survival.

To facilitate early diagnosis of RA, a joint working group of the American College of Rheumatology (ACR) and the European League Against Rheumatism (EULAR) developed a new approach for classification of RA in 2010 (table 1). Imaging techniques – such as magnetic resonance imaging (MRI) or ultrasound – may also be used as additional evidence to confirm the clinical findings.

Table 1. The 2010 ACR/EULAR classification criteria for rheumatoid arthritis²

	Score
Target population (Who should be tested?): Patients who	
1) have at least 1 joint with definite clinical synovitis (swelling)	
2) with the synovitis not better explained by another disease	
Classification criteria for RA (score-based algorithm: add score of categories A–D; a score of 6/10 is needed for classification of a patient as having definite RA)	
A. Joint involvement	
1 large joint	0
2–10 large joints	1
1–3 small joints (with or without involvement of large joints)	2
4–10 small joints (with or without involvement of large joints)	3
>10 joints (at least 1 small joint)	5
B. Serology (at least 1 test result is needed for classification)	
Negative RF and negative ACPA	0
Low-positive RF or low-positive ACPA	2
High-positive RF or high-positive ACPA	3
C. Acute-phase reactants (at least 1 test result is needed for classification)	
Normal CRP and normal ESR	0
Abnormal CRP or abnormal ESR	1
D. Duration of symptoms	
<6 weeks	0
≥6 weeks	1

In addition to early suppression of disease activity, several studies investigated the importance of tight control on disease management. The TICORA study³ showed that intensive management (frequent review, formal assessment of disease activity and escalation of therapy in patients with persistent disease activity) improves disease activity, radiographic disease progression, physical function, and quality of life (QoL) at no additional cost. The CAMERA trials⁴ also supported that tight

control strategies schemes did not negatively influence QoL, while the BeSt Study⁵ demonstrated that early tight control (treating early RA patient with initial combination therapy including either prednisone or infliximab) resulted in earlier functional improvement and less radiographic damage after 1 year.

In view of the solid evidences, the 2012 update of the ACR recommendation⁶ suggested performing disease activity and prognosis assessment every 3 months. DAS28 score is a simple and common tool to measure disease activity in clinical practice. It examines 28 joints for swelling and tenderness, measures the ESR/CRP and assesses patient's overall status. A DAS28 score of less than 3.2 and 2.6 are used to define low disease activity and remission respectively.

In framing an optimal RA management plan, the gravity of non-pharmacologic interventions should never be undermined. This includes patient education; psychosocial interventions; appropriate use of rest, exercise, physical and occupational therapy; and nutritional and dietary counseling. Education about the disease, self-management skills, and principles of joint protection improves patients' health and physical function⁷. Exercise programs with both aerobic exercise and progressive resistance training are safe and effective in improving fitness, strength and lean body mass^{8,9}. Physiotherapy enables patients to retain and regain the mobility and function of joints. Patient groups also play an influential role in providing psychological support and resources to cope with the disease better.

Pharmacotherapy generally involves initiating a disease-modifying antirheumatic drugs (DMARDs), with a nonsteroidal anti-inflammatory drug (NSAID) and selective use of low-dose oral or intra-articular glucocorticoids. Most commonly used conventional synthetic DMARDs (csDMARDs) include methotrexate, hydroxychloroquine, sulfasalazine and leflunomide. As their onset of action is slow, coherent communication and goal setting with patients is essential to ensure compliance and treatment outcome.

Biologics mark a major advancement in the management of RA. They are designed to inhibit specific pivotal components of the immune system that fuel inflammation. (table 2) Most biologics have a much faster onset of action than csDMARDs. They are also accompanied by less radiological deterioration^{10,11,12,13} clinically meaningful improvements in HR-QOL and reversal of disease-associated decrements in productivity¹⁴.

Biologics were associated with statistically significantly higher rates of serious infections and tuberculosis (TB) reactivation¹⁵, but similar rates of lymphoma and of lung and skin cancer as do csDMARDs-treated RA patients¹⁶. Therefore, patients should be screened for latent TB and hepatitis B before initiating biologics. According to the Hong Kong Society of Rheumatology Biologics Registry¹⁷, lower respiratory tract and skin/soft tissue are the most common sites of infection.

Despite the wealth of biologics that can be used when methotrexate alone is insufficient, treatment cost can be a major barrier to adopt such approach in some patients. One double-blind, non-inferiority trial compared triple therapy (sulfasalazine and hydroxychloroquine added to methotrexate) to etanercept-methotrexate combination therapy in patients with active RA. Patients were monitored every 12 weeks for disease activity (DAS28, radiograph, etc.) to guide treatment escalation or switching. Triple therapy was shown to be non-inferior to etanercept combination therapy in terms of clinical benefit. This further supports the importance of tight disease control.

Tofacitinib, as the only available targeted synthetic DMARD (tsDMARD), is a novel oral medication for RA management.

It blocks the JAK-STAT pathway intracellularly, halting the signaling of several key cytokines involved in RA. Multiple studies have demonstrated its clinical efficacy – as monotherapy¹⁹ or combination therapy with csDMARDs^{20,21,22,23} – in patients not responding to methotrexate, other csDMARDs or biologics. It is associated with an increased risk of TB infection and herpes zoster reactivation. Therefore, patients should be screened and monitored for latent TB and herpes zoster before and during treatment.

The therapeutic armamentarium of RA has changed dramatically since the last decade. With focus on early diagnosis, close and quantitative monitoring of disease activity, and intensive goal-directed therapy to achieve the best possible outcomes for patients, RA patients should be able to enjoy better quality of life.



Table 2. Summary of advanced DAMRDs

Trade Name	Xeljanz	Enbrel	Humira	Simponi	Cimzia	Remicade	Orencia	Actemra	MabThera
Generic Name	Tofacitinib	Etanercept	Adalimumab	Golimumab	Certolizumab	Infliximab	Abatacept	Tocilizumab	Rituximab
Class of Medicine	tsDMARD*	Biologics							
Mode of Action	JAK inhibitor	TNF inhibitor					T cell inhibitor	IL-6 inhibitor	B cell inhibitor
Route of Administration	Oral	Subcutaneous Injection				Intravenous Infusion			
Frequency of Administration	Twice daily	Once weekly	Once every 2 weeks	Once monthly	Induction on week 1, 3 & 5. Maintenance in every 2 or 4 weeks.	Induction on week 1, 3 & 7. Maintenance in every 8 weeks.	Induction on week 1, 3 & 5. Maintenance in every 4 weeks.	Once every 4 weeks	Once on day 1 and 15
Common Adverse Effects	upper respiratory tract infection, headache, diarrhea, nasopharyngitis	injection site reaction, infections, puritis, fever	injection site reaction, infections, dizziness, headache	upper respiratory tract infection, nasopharyngitis	injection site reaction, upper respiratory tract infection, urinary tract infection	infusion reaction, respiratory tract infection and urinary tract infections	headache, upper respiratory infection, nasopharyngitis and nausea	upper respiratory tract infection, headache, dizziness, rash, abdominal pain, hypertension etc	acute infusion reactions, infections, dyspepsia

*tsDMARD = targeted synthetic DMARD

Reference

1. Helmick C.G. Arthritis Rheum. 2008;58(1):15–25.
2. Aletaha D. Arthritis Rheum. 2010;62(9):2569–81.
3. Grigor C, et al. Lancet. 2004;364(9430):263–9.
4. Jurgens MS, et al. Clin Exp Rheumatol. 2014;32(3):369–76.
5. Goekoop-Ruiterman YP. Arthritis Rheum. 2005;52(11):3381–90.
6. Singh JA. Arthritis Care Res (Hoboken). 2012;64(5):625–39.
7. Masiero S. Clin Rheumatol. 2007;26(12):2043–2050.
8. Hurkmans E. Cochrane Database Syst Rev. 2009;(4):CD006853.
9. Lemmey AB. Arthritis Rheum. 2009;61(12):1726–1734.
10. Smolen JS. Arthritis Rheum. 2005;52(4):1020–1030.
11. Klareskog L. Lancet. 2004;363(9410):675–681.
12. Cohen SB, et al. Arthritis Rheum. 2006;54(9):2793–2806.
13. Nishimoto N, et al. Ann Rheum Dis. 2007;66(9):1162–1167.
14. Strand V. Drugs. 2010;70(2):121–45.
15. Singh JA. Cochrane Database Syst Rev. 2011;(2):CD008794.
16. John JC. Drug Safety Quaterly. 2012;4(2):1–3.
17. Mok CC. Int J Rheum Dis. 2014;17 Suppl 3:1–8.
18. O'Dell JR. N Engl J Med. 2013;369(4):307–18.
19. Fleischmann R. N Engl J Med. 2012;367(6):495–507.
20. van Vollenhoven RF. N Engl J Med. 2012;367(6):508–19.
21. Kremer J. Ann Intern Med. 2013;159(4):253–61.
22. van der Heijde D. Arthritis Rheum. 2013;65(3):559–70.
23. Burmester GR. Lancet. 2013;381(9865):451–60.



HOSPITAL
UPDATES

Just How Friendly are These Beta-Lactams?

By Pharmacy Department

The most commonly reported adverse drug reactions of the beta-lactam antibiotics are allergic reactions. Members of the beta-lactam antibiotics include penicillins, cephalosporins, carbapenems, and monobactams. These groups of antibiotics account for a large proportion of our available antibacterial arsenal. In cases of confirmed allergy status with the penicillin skin test or severe reactions (eg. anaphylactic shock, urticaria, or angioedema), the culprit medication must be avoided and the patient not re-challenged. However, in the presence of unconfirmed allergies or self-reported mild to moderate reactions, prescribers often understandably caution on the safe side and are left with suboptimal alternatives. This poses a risk especially if the beta-lactam agents are indicated as first-line. Alternative or second/third-line agents can be less effective against the infection, have more drug-drug interactions or adverse effects, increase chances of selective resistance, and being more costly. It is therefore important to understand the risks of cross-sensitivities amongst the different groups and explore the patient's allergy history to ensure the safest and most effective treatment is employed. Let's review these two issues.

The bicyclic core component is regarded as the most responsible for beta-lactam cross-sensitivity. The bicyclic core is present only in the penicillins, cephalosporins, and carbapenems, but not in the monobactam group (Figure 1). The monobactams (eg. aztreonam, which is not currently registered in Hong Kong) has a monocyclic beta-lactam core, has little cross-sensitivity with penicillin, and can be safely used in patients who are allergic to penicillins. The self-reported allergy rate to penicillins is up to 10% of the population. However, it is found that as high as 80 to 90% of these self-reported cases will not test positive for the penicillin skin testing or the patient will tolerate a course of penicillin antibiotic with no hypersensitivity. This discrepancy can be

due to the fact that some patients never had a true allergy to the antibiotic but rather experienced an adverse effect or the reaction was due to the disease (eg. rash development when amoxicillin is prescribed for a viral infection). It also has been observed that the percentage of positive penicillin skin tests decreases overtime and the number of patients still testing positive seen reduced to one third of the initial levels after ten years or more of avoidance.

Cephalosporin allergy testing is reserved mainly for the research setting. Historically, the cross-sensitivity between penicillin positive allergy and cephalosporin allergy was reported to be as high as 20%. This high cross-sensitivity seen is attributed to the similar side chains seen in benzyl penicillin and the then commonly used cephalothin and cephaloridine – these are no longer registered in Hong Kong. In addition, prior to the 1980s, some of the manufacturing of cephalosporins was found to be contaminated with amounts of penicillin which would have falsely elevated the cross-sensitivity. Since the rectification of the manufacturing process and the introduction of the newer generations of cephalosporins which have variant side chains, the reaction rates have dropped to 1 to 4%. In particular, in patients who tested positive for the penicillin skin test, around 2% will actually be hypersensitive to the cephalosporin group. Of note, amoxicillin has an identical side chain to cefadroxil while ampicillin has an identical side chain to cefaclor and cephalexin. Hence, patients who have had a reaction towards amoxicillin or ampicillin should avoid using a cephalosporin with an identical R group side chain.

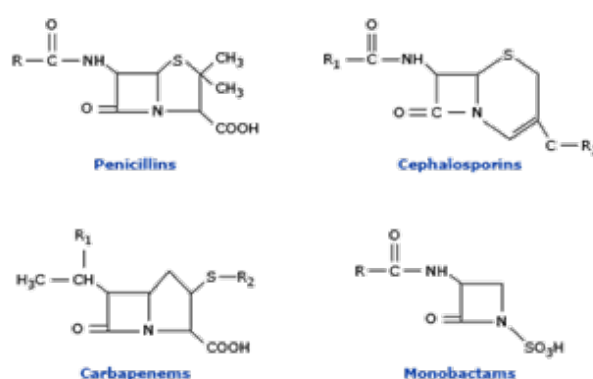
Earlier reports suggested a high cross-sensitivity between penicillins and carbapenems, up to 50%. However, the sample sizes in these reports were small and most of them were of a retrospective design. With more recent and prospective studies, the cross-sensitivity risk between penicillins and carbapenems

is suggested to be closer to 0 to 10%. In patients with a possible history of penicillin hypersensitivity who require carbapenem treatment, prior carbapenem skin testing is suggested in the literature. One protocol in the study by Atanasković-Marković et al. used Meronem® at a concentration of 1mg/ml in normal saline¹. This reagent was first assessed as a skin prick; if no reaction developed, intradermal injection was performed. In this study, histamine solutions via skin prick and intradermal tests served as controls. If the result is negative to meropenem, the chance of an allergic reaction to the injected drug is very small as demonstrated in the study. Nonetheless, there was no mention of validation on the meropenem skin test used in the study and carbapenem skin test protocols may not be readily available in various local hospitals. Therefore, if the use of a carbapenem antibiotic outweighs the risk of a possible penicillin allergy, the prescriber may wish to administer the drug at a low initial dose via a graded challenge and monitor the patient carefully with anaphylactic treatments readily available.

A common clinical issue is whether a patient with self-reported penicillin allergy can safely use other beta-lactam antibiotics. It is therefore important to take the time and effort to probe into the details of the self-reported allergy. Key components that must be considered are how long ago was the incident, the type and duration of the reaction, time of reaction onset after use of the suspected drug, if related drugs have been used since the incident, and other concomitant medications

or diseases present at that time. If the documented reaction is recent, severe, or highly likely of the antibiotic then an alternative therapy may be ordered, or a validated skin test first performed if possible, or use of a graded challenge or lower test dose if the drug in question is to be administered. Change of antibiotic therapies merely based on self-reported allergies without assessing the individual's risk should be done cautiously because, with newer and more stringent studies, we now know the true risks of cross-sensitivities are relatively low. Furthermore, it can lead to treatment failure, risk of increased side effects, unnecessarily use of broader spectrum agents, and higher cost. All factors must be carefully weighed case by case as the patient's safety should always be the top priority.

Figure 1 – Structure of penicillins and related beta-lactam drugs (adapted from UpToDate)



Reference

1. Atanasković-Marković M, Gaeta F, Medjo B, Viola M, Nestorović B, Romano A. Tolerability of meropenem in children with IgE-mediated hypersensitivity to penicillins. *Allergy* 2008;63:237-40.
2. Prescott WA, Kusmierski KA. Clinical importance of carbapenem hypersensitivity in patients with self-reported and documented penicillin allergy. *Pharmacotherapy* 2007;27(1):137-42.
3. Solensky R. Penicillin-allergic patients: use of cephalosporins, carbapenems, and monobactams. Waltham, MA: UpToDate. (Accessed January 14, 2015, at http://www.uptodate.com/contents/penicillin-allergic-patients-use-of-cephalosporins-carbapenems-and-monobactams?topicKey=ALLRG%2F2087&elapsedTimeMs=0&source=search_result&searchTerm=beta+lactam+allergy&selectedTitle=1%7E150&view=print&displayedView=full#)
4. Macy E. Penicillin and beta-lactam allergy: epidemiology and diagnosis. *Curr Allergy Asthma Rep* 2014;14(11):476.
5. UWHC guidelines for the use of beta-lactam antibiotics in patients with reported allergies to penicillin. Madison, WI: University of Wisconsin Hospitals and Clinics, 2009. (Accessed on January 14, 2015, at http://www.uwhealth.org/files/uwhealth/docs/antimicrobial/Guidelines_for_the_use_of_Beta-lactam_antibiotics_in_patients_with_reported_allergies_to_penicillin.pdf)

New Drugs available at SPH

After Drug and Therapeutics Committee (DTC) Meeting in December 2014, the following new drugs are approved:

Approved drugs	Indication(s)	Usual dosage	Note
Cimzia (Certolizumab pegol)	TNF inhibitor injection for rheumatoid arthritis (RA), psoriatic arthritis, ankylosing spondylitis(AS)	Starting dose: 400mg, given as 2 x 200mg Subcut. Injection at week 0, 2 and 4 Maintenance dose: 200mg every 2 weeks or 400mg every 4 weeks	<i>Order on doctor's request only</i>
Fycompa 2mg tablet	Partial-onset seizure with/without secondarily generalised seizure. For ≥ 12 years	Initial at 2mg/day once a day before bedtime, titrate up by 2mg increment every 2 weeks to maintenance dose of 4-8mg/day	Sample Trial
Oseni (Combination of Alogliptin 25mg and Pioglitazone 15mg)	Type II Diabetes Mellitus	Once daily	Sample Trial
Ultibro Breezhaler (Indacaterol bromide 110mcg/ Glycopyrronium 50mcg)	Chronic Obstructive Pulmonary Disease (COPD)	Once daily dose	Available in SPH



PRESENTATION

RECAP AT CME

Audit Review

16th September 2014



Dr. Miu Kin Man, Raymond
Specialist in Cardiology, St. Paul's Hospital

Audit on Effectiveness of Cardiopulmonary Resuscitation (CPR) in the St Paul's Hospital 2013

Introduction

CPR is a lifesaving intervention and the cornerstone of resuscitation from cardiac arrest. In order to evaluate CPR performance, we performed an audit in the hospital and benchmarked it with an international standard.

Objectives

1. To review the rate of restoration of spontaneous circulation (ROSC) and survival-to-discharge after CPR
2. To assess the response time of our resuscitation team
3. To assess data completion rate on resuscitation record.

International Standard

National Registry of Cardiopulmonary Resuscitation 2003 (NRCPR)

Methodology

A retrospective audit on resuscitation cases in 2013 was performed. The resuscitation records were reviewed by a nurse specialist, an ACLS instructor and a staff consultant in cardiology using a standardized audit form

Definition of a Resuscitation Event

- Cardiopulmonary arrest that requires chest compressions and/or defibrillation
- Acute respiratory compromise that requires emergency assisted ventilation (either noninvasive or invasive)

Results

Among the audit period, there were 29 cases found in the CPR registry. Five cases were excluded from the analysis as they were not considered to be cases of cardiac arrest. The majority of the patients requiring CPR (95.8%) were above age 61 and 62.5% were above 80 years of age. The average age of our patients were 80.3 years. 50% of them required CPR within 48 hours after hospitalization. The most common pulseless rhythm identified during cardiac arrest was asystole

(50.0%). Shockable rhythms were found in 4.2% (Ventricular tachycardia:VT) and 0% (Ventricular Fibrillation:VF) of the patients respectively.

All patients received resuscitation within 5 minutes of developing cardiac arrest. The first doctor to arrive on the scene to provide CPR was able to do so within 10 minutes of crash code activation in 100% of our cases. For the only case whose initial cardiac arrest rhythm was VT, the time to the first defibrillation was 2 minutes. Among those patients requiring active airway management, endotracheal tube was successfully inserted with less than 2 attempts in 62.5% of cases. ROSC was achieved in 54.2% of the resuscitation cases. The immediate mortality rate was 45.8%. Only 6 cases (25.0%) could survive to discharge.

Completeness of Record

4 records (16.0%) were found to have no signature in the record and 1 CPR audit form was found to be missing.

Discussions:

This was the first systematic audit of the effectiveness of CPR performance in our hospital. Of note is the prompt delivery of CPR as reflected by our early initiation of CPR and timely arrival of a clinician to coordinate the CPR process. Our only case with VT as the first cardiac arrest rhythm received prompt electrical therapy. None of our resuscitation cases requiring advanced airway management needed more than two attempts of endotracheal intubation.

The immediate outcome of CPR delivery among our cohort was comparable to the large overseas registry with ROSC attained in 54.2% of our patients versus 44% in the NRCR registry. Survival to discharge was 25 % as compared to 17% to the NRCR database.



Dr. Lo Hak Keung, Alex
Specialist in Urology, St. Paul's Hospital

Audit on Effectiveness of One Stop Uretero-renoscopic Lithotripsy (URSL) service in SPH

The incidence and prevalence of urinary tract stone is increasing globally which is believed to be due to changes in dietary practice and global warming in recent decades. The average global prevalence was 3.25% in the 1980s and raised up to 5.64% in the 1990s. The prevalence of patients with renal stone disease was 2.5% in Hong Kong which is relatively low when compared to 5.0% in Korea and 9.6 % in Taiwan.

In order to evaluate the effectiveness in managing urinary tract stone in St Paul's Hospital, we performed a retrospective study which included 204 patients who had treatment of ureteric stone from Jan 2011 to Dec 2013. (M: 155, F: 49; age: 23 – 88, mean : 47.5). About 80% of them presented with classical renal colic. Sometimes, pain may not be that specific. Patients may just complain of bowel colic, and when associated with nausea and vomiting, they may be mistakenly treated as gastroenteritis. About a quarter of them presented with haematuria, and occasionally, patients presented with UTI symptoms or even urinary retention.

CT-urogram is now considered as the gold standard investigation for patient with acute renal colic. Intravenous urogram is seldomly performed nowadays. With an effective radiology department in St Paul's hospital, 57% of the patients were able to have their diagnosis confirmed by various imaging techniques within 4 hours after admission. Indeed, more than 80% of them were able to have diagnosis confirmed within 24 hours.

According to AUA, EAU stone management guideline for ureteric stone < 1.0 cm, three different treatment options including expectant treatment, Extracorporeal Shockwave Lithotripsy (ESWL) and Ureterorenoscopic Lithotripsy (URSL) should be discussed with the patient. In my experience, about 5-10% of the patient would choose expectant treatment. Coincidentally, equal number of patients opted for ESWL and URSL in our study.

For the 102 patients who opted for URSL, one third of them were able to have their procedure done within 4 hours and another 25 % within 8 hours after diagnosis. Indeed 85% of our patients were able to have their procedure done within 24 hours. URSL is not a difficult procedure in expert hand. Twenty percents of our patients had OT time less than 20 minutes and another 54% finished within 20-40 minutes. Managed anaesthetic care is feasible. Laser fragmentation and ureteral stenting was required in 50% and 10% of the cases respectively.

Our single session complete stone clearance rate was 95.2% and no re-treatment procedure was required. One quarter of patients complained of short duration of renal colic shortly after procedure and 12 % complained of haematuria lasting more than 2 days. About 35% of patient were discharged within 1 day after their admission, and up to 80% were discharged within 2 days time.



Dr. Tse Kai Chung
Specialist in Nephrology, St. Paul's Hospital

Audit on Central Line Insertion in SPH

Central line insertion is a common bedside procedure. International guidelines recommend that ultrasound (USG) guidance should be the standard practice for central line insertion to minimize complications. Right internal jugular vein (RIJV) is the optimal site for insertion and the usual overall success rate for puncture is quoted to be around 90% with USG guidance. We have performed an audit on central line insertion from Dec 2012 – Jan 2014. Total 110 cases of line insertion from general ward and intensive care unit were collected. Ten doctors were involved in line insertion and majority of cases (90%) were reported to use real time USG guidance. Patients were mostly elderly with slightly more male patients (mean age: 74.1 years, males: 55.5%). The commonest indication for line insertion was poor peripheral venous access (53.6%), followed by drug therapy (25.5%) and renal replacement therapy (23.6%) (some cases had more than one indication).

RIJV was the commonest site of insertion (80%) whether the doctor used USG guidance or not. The single puncture success rate for real time USG guidance was 93%. In other words, the need for multiple punctures (equal or more than two) was only 7%. Complication rate was 4% but all were unrelated to arterial puncture or pneumothorax.

Our results are in line with international benchmarks. This is important in the private hospital setting as patient satisfaction is improved due to a low incidence of multiple punctures and complications. This may also reduce the incidence of line sepsis if the line needs to be kept for a longer period of time. A portable USG machine is available in the Outpatient Department and is ready for use by doctors who would like to perform central line insertion.



OUTREACH ACTIVITIES

社區「保」「健」日 - 明愛牛頭角社區中心

(30/11/2014)

由聖保祿醫院、天主教基督勞工堂、明愛牛頭角社區中心及癌症基金會合辦的社區「保」「健」日已於二零一四年十一月三十日圓滿結束。

活動目的是為基層市民提供免費身體檢查及推廣保健知識。檢查項目包括量度血壓、骨質密度測試、乙型肝炎抗原快速測試、肝/膽/腎超聲波掃描、眼科檢查、膽固醇及血糖測試。

除身體檢查外，推廣健康資訊亦是服務的重要一環。活動設有防癌講座及健體運動示範，更加設由本院首次提供的社區藥劑師諮詢服務。我們希望透過這些資訊性項目，讓市民能掌握更多正確的保健知識，並能及早發現健康問題，獲得適當的治療。

服務對象以獨居長者、新來港、低收入及南亞裔人士優先，以確保基層市民能夠受惠。參與是次活動的義工，包括修女、學生及醫護人員人數接近一百人，而服務名額亦多達五百個。藉此，我們衷心感謝盡心盡力的義工們，不辭勞苦地為不同階層人士提供服務。聖保祿醫院會繼續秉承聖保祿宗徒「為一切人成為一切」的服務精神，平等地為病患者提供醫療服務，及以有效而快捷地幫助病人恢復健康為己任。



楊鳴章副主教、盧伯榮神父、張柱見修女及何兆煒醫生主持揭幕儀式



藥劑部同事為長者檢查常服藥物，教導長者們正確用藥



參加者由復康中心同事指導參與運動工作坊「巾你做個friend」



HOSPITAL ACTIVITIES

職安健及員工健康日

(07/11/2014)

職安健環委員會於二零一四年十一月七日假聖保祿修院會議廳舉行「職安健及員工健康日2014」，目的是希望透過遊戲方式，提升同事的職業安全及健康意識。當日出席活動嘉賓包括聖保祿醫院執行董事張柱見修女、醫務總監何兆煒醫生及職安健環委員會主席馬曼芳女士，參與人數更超過三百人。

為達致活動主題「職業安全 and 健康」，委員會邀請了本院藥劑部、復康中心、牙科中心，以及一直支持本院工作的機構參與，透過攤位遊戲讓同事認識有關藥物安全、預防針刺、牙齒健康、潔手衛生、預防筋骨勞損、體重標準及防癌等知識。

活動當日亦頒發「零針刺利器安全比賽」獎項。眾所周知針刺意外對醫護人員具有一定風險，故委員會籌辦此比賽，以提高員工對預防針刺的安全意識。冠軍殊榮最終由手術室奪得，優異獎則由病房A8和A13獲取。

整個活動得以圓滿結束，有賴各同事熱心協助和參與，本委員會特此鳴謝。



工作人員大合照



攤位開始之前，先進行熱身遊戲



「零針刺利器安全比賽」
冠軍部門 - 手術室





追思彌撒

(20/11/2014)

由聖瑪加利大堂主任司鐸關傑棠神父和羅神父主禮的追思彌撒已於二零一四年十一月二十日順利舉行。追思彌撒的目的是為了悼念在本院逝世的病人和親友恩人。參禮者約有一百二十人，當中包括亡者的家屬、醫院各部門的代表、修女以及堂區的熱心教友。

至親至愛的離世，令人感到難過和悲傷。關神父在講道中說：「死亡是每一個人必然會遇上，有些在孩童時候離世，有些則是在年老的階段。藉 信仰，我們相信死亡並非終結、並非毀滅，而是永生的開始，將來我們必有機會與亡者在天鄉重逢」。藉著講道，我們希望亡者的家屬能得到心靈的安慰，並早日走出喪親陰霾。

我們在此向各位蒞臨參與追思彌撒的同事及協助禮儀進行的教友們表達謝意。主祐大家！

牧靈部

週年火警演習

(27/11/2014)

保障病人及員工安全是聖保祿醫院堅守的承諾。為確保醫院一旦發生火警時，對病人及員工的影響減至最低，本院於二零一四年十一月廿七日舉行週年大型火警演習，模擬A座8樓茶水間內微波爐故障引致失火，以測試有關部門的應變能力。參與是次大型火警演習的員工及模擬病人來自醫院各個部門，人數超過四百人。灣仔消防局亦派出一隊消防人員在場觀察整個演習過程。

演習的結果理想，參與的灣仔消防局、臨床醫護人員及後勤支援部門員工，均能在事發時按照既定機制執行應變措施，有秩序地進行疏散。分享會於演習後進行，感謝消防人員為本院提供寶貴意見，以進一步完善及優化本院的火警應變措施。



員工在模擬發生火警現場執行應變措施。



入院部透過廣播系統向全院發出火警訊息。



樓層部門同事跟據廣播指示作出應變措施。



四百多名員工由工作崗位疏散至集合地點。



指揮中心成員在火警中擔當重要的統籌及溝通工作。



員工協助模擬病人前往集合地點。



人力資源部同事點算疏散人數。

二零一四年

聖保祿醫院聖誕聯歡晚宴

(16-17/12/2014)

二零一四年聖保祿醫院聖誕聯歡晚宴一連兩晚假座銅鑼灣富豪酒店舉行，共延開八十席，近千名來賓蒞臨，包括神父、修女、醫生及各部門的同事，一同歡度聖誕佳節。

晚宴開始前，本院先頒發長期服務獎予服務了十年、二十年及三十年的同事，感謝他們多年來與醫院並肩作戰，見證這大家庭的成長，亦鼓勵其他員工繼續努力，在各自的工作崗位上發光發熱。晚宴於神父帶領祈禱後正式開始。

今年的表演節目非常豐富，首先由復康及骨科中心的劉業光醫生打響頭炮，以色列風獨奏充滿節日氣氛的聖誕曲目，緊接著是副醫務總監袁兆燦醫生高歌一曲，最後由醫務總監何兆煒醫生與新成立的音樂小組合唱，成員包括藥劑部、人力資源部、復康中心、十一樓及十九樓病房的同事，將整晚氣氛推至頂峰，贏得台下觀眾熱烈掌聲。

精彩節目浪接浪。晚宴另一重頭節目就是全場互動遊戲，分別有「考考記憶力」，從各部門預先錄製的祝賀短片中找答案的搶答遊戲，及「一家團圓之St. Paul一家親」，用報紙剪出圓圈圍繞最多人數為優勝者的競賽遊戲。同事們都全情投入遊戲中，展現互相合作的精神，氣氛緊張刺激。最後是萬眾期待的幸運大抽獎環節，獎品琳琅滿目，得獎幸運兒的歡笑聲此起彼落，晚宴亦於歡樂氣氛下圓滿結束。



祝酒儀式為聯歡晚宴揭開序幕。



聖誕老人率先進場，向各來賓及同事祝賀，分享愛和喜悅的訊息。



沙爾德聖保祿女修會張月娥省會長、前省會長何美蘭修女及執行董事張柱見修女頒發十年、二十年及三十年長期服務獎予有關員工。



何兆煒醫生及袁兆燦醫生擔任神秘嘉賓，帶領各部門同事為來賓高歌一曲，掀起全晚高潮。



劉業光醫生即席以以色列風演奏一曲，嘉賓及同事們都聽得津津有味。