The Garamut

Issue #3: March 2010

The Newsletter of the PNG Society of Rural and Remote Medicine

From the Editors Desk:

Hi all,

Well don't know about you but it's been a fairly crazy-busy few months at this end – crazy but very satisfying.

Every time I sit down to right this editorial at the moment it seems our Society has taken some new step forward. No doubt the recent highlight was the IMEESC Workshop at Kudjip hospital last month (see report on page 2), which was such a blessing in many ways. Although we all learnt a lot, I think the enjoyment of just meeting similar doctors from all around the country was the main thing I will take away. We need to thank Ausaid through their HECS program for financially supporting the event and particular thanks to Prue Watters who coordinated all that.

The other big development in the past couple of months has been the substantial contribution of W.H.O. to our Society, by offering to take over the printing and distribution of this newsletter to the extent that now we are sending copies to all of our medical student colleagues in training, and our partners in the National DOH office and Provincial offices and Provincial hospitals around the country. This development can only be good for continuing to raise the profile of rural health and rural medical practice around the far corners of PNG. For that we owe a great debt of gratitude to the W.H.O. office in Pt. Moresby, which has been so supportive from the start.

We know that many of you work in the remotest of locations, sometimes without communication, infrequent transport and often you are working alone. What you do it tough – arguably tougher than any medical job going around in PNG. We hope that at least by this newsletter and other Society activities you will have a growing sense that there are others at the coal face with you and that you draw encouragement from that.
Blessings on your work. Ed.

Contents of this Edition:

MMED (Rural) News

- Surgical Rotation #1 – Dr Maggie Taune , May 10th -6th August, Kudjip Hospital
- Surgical Rotation #2 – Dr .Raymond Saulep, 14th June - 10th Sept, Kundiawa Hospital
- Surgical Rotation #2 – Dr. Gabriel Yohang, 13th Sept-December 10th
- Surgical Rotation #3 – Dr. Felix Diaku, 22nd March – 18th June, Kundiawa Hospital
- Surgical Rotation #2 – Dr. Trevor Kelebi, July 5th – Sept 24th (tentative) – Gaubin Hospital

Management and Leadership Training postponed until September

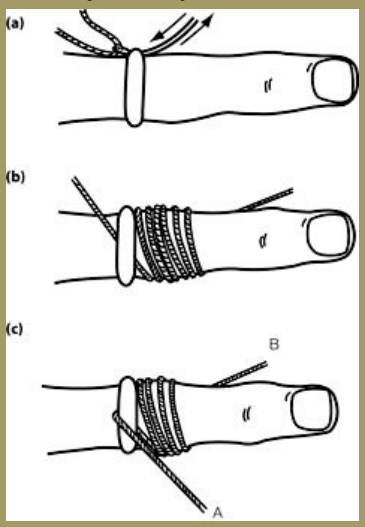
Words of Wisdom.

"Do not let this book of the law depart from your mouth; meditate on it day and night, so that you may be careful to do everything written in it. Then you will be prosperous and successful. Have I not commanded you. Be strong and courageous. Do not be terrified. Do not be discouraged, for the Lord your God will be with you wherever you go. " (Joshua 1:8-9)

Murtagh's Practice Tips.

Removal of ring from finger

From time to time one is faced with the need to remove a ring from a swollen finger. Destruction of a possibly valuable piece of jewellery can often be avoided by the following.



Method

Using a needle, bent paper clip or bobby pin, pass a length of dental tape (the best), cord or string (or Mersilk) under the ring (Fig. 8.3a). The ring should be over the narrowest part of the phalanx for this. **Fig. 8.3** *Removal of ring from finger:* ***(a)*** *thread string through bobby pin or needle passed under ring;* ***(b)*** *wind string firmly round finger after liberally applying Vaseline;* ***(c)*** *hold firm at B and pull and unwind at A*

Liberally apply petroleum jelly or moistened soap paste to the finger, distal to the ring. Wind about six turns of the string around the finger close to and immediately distal to the ring (Fig. 8.3b).

While holding the end (B) of the cord firmly, pull the proximal end (A) over the ring, roughly parallel to the long axis of the finger, unwinding it steadily in the same direction in which the distal coils were wound originally (Fig. 8.3c). The pressure of the cord is thus applied successively around the periphery of the ring, forcing it distally. The distal cords, by applying pressure, also help to reduce the oedema of the finger.

In many cases the ring slides off with little or no discomfort and without damage to ring or finger.

Sometimes a digital block may be necessary.

Reference: *Practice Tips* Murtagh, J 4th Ed. McGraw Hill (1)

Integrated Management of Emergency and Essential Surgical Care - Workshop, Kudjip Nazarene Hospital, February 22nd - 26th

The idea for this workshop had been tossed around since the IMEESC tools where introduced to us by Dr. Meena Charian from WHO's Global Initiative on Emergency and Essential Surgical Care (GIEESC) team in Geneva. The tools were clearly highly applicable to the District Hospital setting in PNG so I suppose it was only a matter of time before we looked to try and get a workshop off the ground.

Practicing intraosseous needles!

Kudjip Nazarene Hospital in the Western Highlands played host to 14 doctors from all over PNG in what was a first for training of rural doctors in PNG – in many ways. Our very great thanks goes to all the staff at Kudjip, but particularly to Dr. Jim Radcliffe (Head of Surgery) and his lovely wife Kathy who along with Judy Bennett did a fantastic job of looking after us all and making it a truly memorable week.

The teaching was a mix of lectures, case studies, personal stories and practical stations (no-one will forget Gabriel resuscitating the chicken via emergency airway in a hurry!) The days were fairly long, with plenty of material from two extremely experienced surgeons. For those of us just starting out, it was hard not to be intimidated at times by the vast catalogue of experience they possessed, but we were all reminded that no-one is born with the experience. It has to be acquired – sometimes painfully! And perhaps that was the best part of the whole week; the chance to talk (sometimes long into the night) with doctors from all over the country, mostly working in remote locations and being encouraged that we are all in the same boat together!

So all in all, it was a huge success and we are already planning the second workshop for later in the year. Those interested better put their names down early, if the reaction to this course was anything to go by!

Bush Mechanics!

Solar Vaccine Fridges

Solar powered vaccine fridges have been rolled out around various parts of PNG and are probably the easiest way to maintain cold chain in remote locations were moving gas or kerosene, or fuel for generators is problematic. Many areas missed out on the roll out program though, and you may wish to consider installing your own in needy locations.

These fridges can be purchased through a BP Solar agent (in PNG one such is TEPNG in Pt. Moresby, or there are many different ones in Australia and you may find going overseas is still cheaper even with import duties.) Below is a brief overview on the product (the NRC30-10 vaccine refrigerator) from the BP Solar product catalogue.

"The NRC 30-10 … is specially constructed, ultra high efficiency unit designed to maintain tight temperature tolerances specified by WHO. The cabinet has 100mm thick insulation and has a durable but lightweight aluminium skin.

BP Solar supplies a fully integrated package for these systems, which includes solar modules, mounting structures, refrigerator, regulator c/w metering, solar batteries, all interconnections and comprehensive installation and user manual. Options include battery boxes, tool kits and maintenance kits." (2)

NRC 30-10 Vaccine Refrigerator – Specifications.

- **Fridge capacity - 26L**
- **Freezer capacity - 10.9L**
- **Ice making capacity - 2.1kg/day**
- **Estimated watthours/day (@32°C) (without ice pack freezing - 440**

Approximate price – around A$12,000 for the basic kit (not including mounting frame or battery box) – this price is ex-Australia so does not include transporting it or import duties. Current prices from PNG suppliers are around K46,000.

BOOK REVIEW

Managing Complications in Pregnancy and Childbirth *– A Guide for Midwives and Doctors*

(World Health Organization)

This is a handy quick reference guide for young "green" doctors and those without much experience in obstetrics.

The manual is divided into 3 sections; Clinical Principles, Symptoms and Procedures. The layout is mainly point or bullet form notation, which is perfect for those emergency situations when you don't have much time to read entire paragraphs to guide your management.

The use of "Symptoms" allows for quick referencing based on presenting complaints of common obstetric emergencies. Within each symptom the possible causes are outlined with the specific management for each cause detailed.

The Clinical Principles section provides tables for rapid assessment as well as basic overviews of anaesthesia, analgesia, blood product use and more.

The Procedure section provides a summary of the main steps to carry out procedures that may be required in emergency situations such as para-cervical block, caesarean section, symphysiotomy etc.

The manual can also serve as a foundation from which you can build your emergency obstetric protocols, adapting and refining to your specific hospital facilities. The language is simple and the step by step format makes it easy to follow the principles or train of thought and as such makes it a useful teaching tool for your inservice training program.

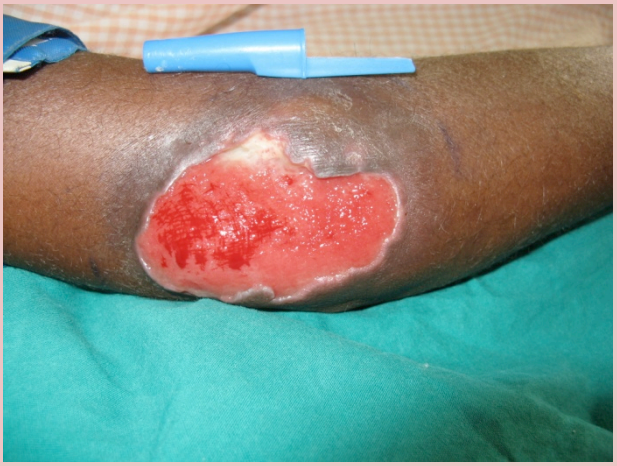
Available through WHO Press. For an electronic version go to:
www.who.int/reproductive-health

- Dr. Imelda Assaigo.

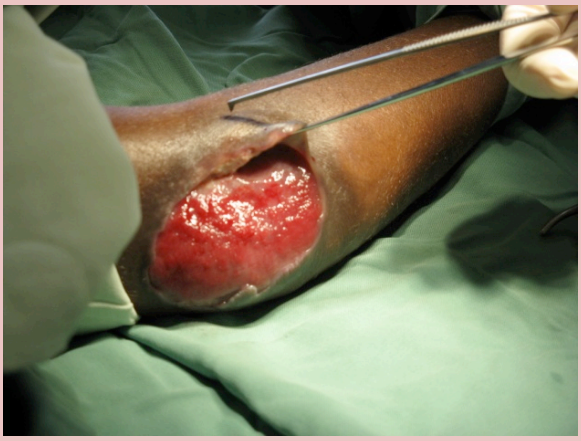
Send us your photos!

Let's see you at work. Email them to us at pngruralsociety@gmail.com

Case Study: 10 year old girl with ulcer on elbow.



This young girl presented to the Health Centre at Obo on the Fly River with an ulcer the size of a 20 toea coin. The mother stated that it had started with a small blister five weeks prior to that. The Nursing Officer at the Health Centre was concerned because the ulcer had undermined edges. Having cared for other patients with similar ulcers, she contacted the doctors immediately. The family was advised to travel to hospital for surgical care, but took a further few weeks to procure the airfares needed. Meanwhile dressings and antibiotics were given. On admission to the hospital she had an ulcer about 6 x 4 cm with indurated skin at the edges. There was no significant tenderness. She was taken to theatre for excision of the ulcer. The edges were largely undermined so she ended up with a much larger skin defect. Within a couple of days, the base of the ulcer was granulating well and she received a split skin graft.



Conclusion: Next page

Society News

The first meetings of the PNG Society for Rural and Remote Medicine were held at the Annual Medical Symposium in Pt. Moresby in September last year.

Society Executive Members – Dr. David Mills (Pres.), Dr. Raymond Saulep (Secretary), and Dr. Gabriel Yohang (Treasurer) with Prof Adolf Saweri.

Important milestones for the Society were the forming of a constitution and the electing of an Executive. We need to thank Lihir Gold Ltd. for their generous support of the Society in it's early days and particularly Dr. Billy Selve for his ongoing advocacy.

We were also presented with two generous grants from W.H.O. for research projects and as yet these have not been used – so Masters students, put your thinking hats on and get this money used. There are some great research topics out there in issues relevant to rural health.

Birthing Kit Project

The Birthing Kit Project is now 10 years old. The project started in PNG in 1999 with 100 kits sent to Milne Bay and it has grown exponentially each year. We have now distributed over 650,000 kits to over 30 countries. The project is now administered by the Birthing Kit Foundation (Australia).

We have also trained over 5000 birth attendants at formal 3-5 day training seminars in Vietnam, Kenya, Congo, India and Ethiopia.

The supply of simple clean birth kits along with training in how to use them significantly reduces the incidence of maternal mortality.

This project has had the benefit of involving thousands of volunteers across Australia at Assembly Days where the kits are put together.

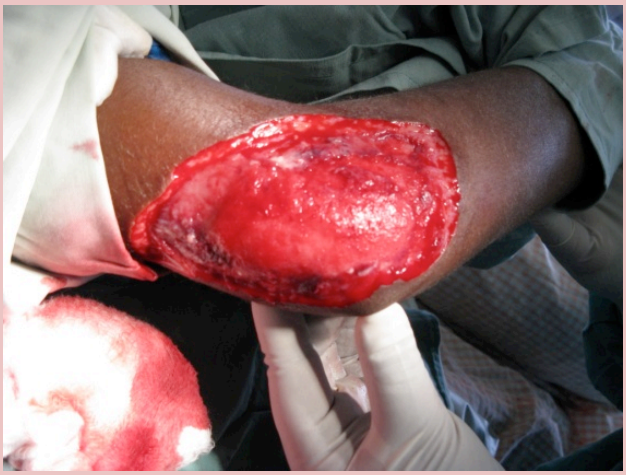
For more information on this valuable project visit the website at www.birthingkitfoundation.org.au

Case Study: - continued.

This girl's ulcer was clinically typical of those caused by Mycobacterium ulcerans, commonly called 'Buruli Ulcer'. Buruli ulcer frequently occurs near water bodies and cases have also occurred following flooding. The mode of transmission of M ulcerans to humans is not clear. It affects all age groups but predominantly those under 15 years. Males and females are equally affected. The disease can affect any part of the body, but most lesions are on the extremities with lower limbs affected more than upper. Unlike tuberculosis (TB), there is no evidence to suggest that infection with the human immunodeficiency virus (HIV) predisposes individuals to BU infection. There is also no evidence that the disease can be transmitted from person to person.

Buruli ulcer often starts as a painless, skin nodule or as an area of induration or a diffuse swelling of the legs and arms. The disease progresses with no pain and fever, hence the delay in seeking treatment. However, without treatment, massive ulcers result, with the classical, undermined borders. Sometimes, bone is affected causing gross deformities. When lesions heal, scarring may cause restricted movement of limbs and other permanent disabilities in about a quarter of patients. The differential diagnoses for Buruli Ulcer include: tropical ulcers; cutaneous leishmaniasis (South America), yaws, onchocerciasis nodules; and fungal skin infections.

Buruli ulcer is often diagnosed and treated based mainly on clinical findings. Ziehl Neelsen staining of swabs from the edges and base of the ulcer will yield Acid fast Bacilli in about 40% of cases.



Current recommendations for treatment are as follows:

- A combination of rifampicin and streptomycin/amikacin for eight weeks as a first-line treatment for all forms of the active disease. Nodules or uncomplicated cases can be treated without hospitalization.
- Surgery to remove necrotic tissue, cover skin defects and correct deformities.
- Interventions to minimize or prevent disabilities.

Cumulative experience of treating about 300 patients in Benin, Cameroon and Ghana has shown that treatment with rifampicin and streptomycin (RS) for eight weeks according to WHO guidelines leads to complete healing of nearly 50% Buruli lesions. Interestingly, it is also possible to treat some of the patients on ambulatory basis. Recurrences after antibiotic treatment is less than 2% compared to 16-30% with surgical treatment alone. These encouraging developments are changing the strategy for BU control and treatment which until 2004 focused on surgical treatment.

In the absence of effective tools to control BU, current control strategies are aimed at reducing the prolonged suffering, disabilities and socioeconomic burden associated with the disease.

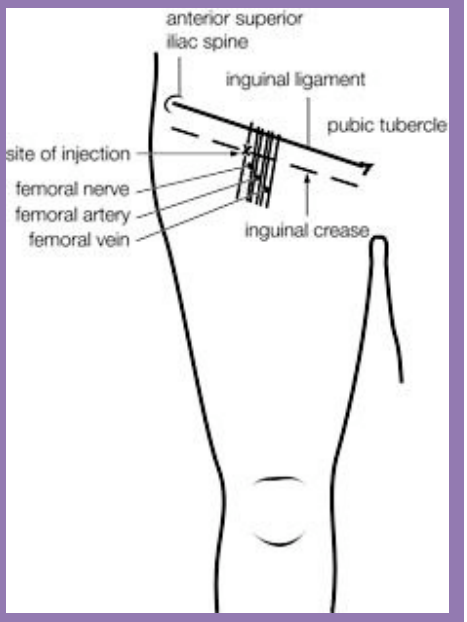
In our case, the awareness that the Nurse had of the disease led her to advise the patient to come to hospital. In retrospect, initiating anti-mycobacterial treatment while awaiting airfares to come to hospital would probably have helped to limit the disease.

With thanks to Dr. Addy Sitther – Rumginae Hospital

Silip i dai! Anaesthetics Corner.

Femoral Nerve Block.

In a general practice setting, and especially in rural and remote areas, a femoral nerve block may prove useful in providing emergency analgesia for the transported patient with a fractured neck of femur or shaft of femur and in reducing the need for systemic opioids.
It is indicated in the analgesia of a fractured femur, especially the femoral shaft. Occasionally it may be used for anaesthesia of the anterior thigh for exploration of soft tissue injuries. Patients with effective blocks cannot mobilise since the quadriceps is weakened, so all patients must be appropriately splinted for transfer. Femoral nerve block is a safe, easy to learn and minimally invasive procedure that can be repeated. Specific training with nerve stimulator guidance or ultrasound will reduce the incidence of arterial puncture.



Anatomy of the femoral nerve

The femoral nerve (L2, L3, L4) enters the anterior thigh about one finger's breadth lateral to the femoral artery immediately below the inguinal ligament. The femoral artery lies at the midpoint of the symphysis pubis and anterior superior iliac spine (ASIS). The femoral nerve lies at the midpoint of the pubic tubercle and the ASIS. The nerve is covered by two layers of fascia, the fascia lata and iliopectineal fascia. Two 'pops' are therefore felt when piercing each of these layers.

Materials

Alcohol swab, an appropriate needle is a 2.5 to 4 or 5 cm 22 or 21 G. A St Vincent's needle is ideal as it ends in a point. When introduced up to the hilt, a 2.5 cm should be sufficient to reach the appropriate area. Otherwise, especially in obese subjects, a 4–5 cm needle can be used.
An appropriate local anaesthetic is 20 mL of 1% lignocaine, or 10 ml ropivacaine or 0.5% bupivacaine (preferred if available).

Method

Identify and mark the site for injection, which should be adjacent to the femoral artery and over the femoral nerve at the level of the inguinal crease. This crease is a skin fold 3 to 5 cm below, and parallel to, the inguinal ligament. Insert the needle and aim it slightly rostral or headwards. As you slowly inject, aspirate for blood and check for pain and paraesthesia. If paraesthesia is elicited, withdraw the needle by 1–2 mm and try again. Fan out all the local anaesthetic as you move in and out eg. ¼ of dose medial, ¼ lateral, ¼ over nerve and ¼ during withdrawal. It should take about 5 minutes for the anaesthesia to start developing.
If attempting to provide anaesthesia for a fractured neck of femur, massage the anaesthetic upwards towards the groin.

Precautions

The only real complication is striking the femoral artery or some small vessel, causing either systemic absorption or false aneurysm formation and local bleeding. Note time of procedure and doses of anaesthetic. The block is contraindicated in patients with severe scarring, infection or necrosis over the femoral triangle. (1)

Sources.

1. *Practice Tips* Murtagh, J 4th Ed. McGraw Hill
2. BP Solar Product Catalogue pg 20-21

The PNG Society of Rural and Remote Medicine is supported by the following organizations:

Correspondence for "The Garamut" to:
The Editor "Garamut"
P.O. Box 16
Mt. Hagen, W.H.P
OR. Electronically to : pngruralsociety@gmail.com

THE ROYAL AUSTRALIAN COLLEGE OF GENERAL PRACTITIONERS

World Health Organization