The Garamut

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The Newsletter of the PNG Society of Rural and Remote Medicine

From the Editors Desk:

Hi all,
I had an interesting email from one of our colleagues not so long back. She related the difficulty of explaining to overseas friends and family the answer to the inevitable question "What sort of doctor are you?" No doubt many of you can relate. Rural medicine contains so many facets, many of which are not immediately recognizable as "medical". Sometimes we have been intimidated, seeing what we do as less recognized by the establishment. There is no doubt that the profile of rural medicine is low in most countries, PNG being no exception.
So it was a real joy to hear her relate how much of an encouragement it had been, to be able to attend "my own specialty meetings" at the recent Medical Symposium.
The launch of the Society was I believe a real step forward in so many ways. At long last it gives rural medicine a "home" in PNG. There is a now a focal point for all those groups who express an interest in the area, not least of which being our government and NDOH. We have been able to pass on the comments that come from your combined experience to the Secretary Clement Malau. It also has encouraged young doctors who have had an interest but nowhere to go.
For my part, the best side was just seeing doctors with so much experience in PNG rural health together formally for the first time, in some cases meeting others who had been here for years but who were only known by name.
We are in the process of taking the next steps, planning for some initial research into the rural medical workforce using the WHO grants, and planning for our first surgical workshop using the IMEESC tools (hopefully early in 2010). Exciting times!

Blessings on your work. Ed.

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MMED (Rural) News

- Surgical Rotation #1 – Dr Raymond Saulep, Kudjip Hospital , Nov 10th – Feb 5th
- Surgical Rotation #1 – Dr. Trevor Kelebi, Kundiawa Hospital Nov 10th – Feb 5th
- Surgical Rotation #1 – Dr. Gabriel Yohang, Kiunga Hospital, Nov 16th – Feb 12th
- Surgical Rotation #3 – Dr. Taiye Pendene, Kudjip Hospital, Feb 8th- May 14th
- Management and Leadership Training Course –

Words of Wisdom.

"Keep your lives free from the love of money and be content with what you have, because God has said, 'Never will I leave you, never will I forsake you.' So we may say with confidence, 'The Lord is my helper, I will not fear. What can man do to me?' " Hebrews 13:5-6

Murtagh's Practice Tips.

Injection for rotator cuff lesions

Injections of local anaesthetic and corticosteroid produce excellent results for inflammatory disorders around the shoulder joint, especially for supraspinatus tendonitis. The best results are obtained with precise localisation of the area of inflammation, although injections into the subacromial space are all that is necessary to reach inflammatory lesions of the tendons comprising the rotator cuff and the subacromial bursa.

The subacromial space injection for rotator cuff lesions

The recommended approach is from the posterolateral aspect of the shoulder, with the patient sitting upright.

Method

1. Draw up 1 mL of corticosteroid (eg. Kenacort, DepoMedrol) and 2–3 mL of 1% LA.
2. Sit the patient upright and explain the procedure in general terms.
3. Identify the gap between the acromium and the humeral head with the palpating finger or thumb.
4. Mark this spot, about 2 cm below the edge of the acromium.
5. Swab the area with antiseptic.
6. Place the needle (23-gauge, 32 or 38 mm long) into this gap, just inferior to the acromium
7. Aim the needle slightly medially and anteriorly.
8. Insert for a distance of about 30 mm. The solution should flow into the subacromial space without resistance.

Tip: Place a weight (0.5–1 kg) in the hand nearest to the affected side to facilitate opening the subacromial space. It also distracts the patient!

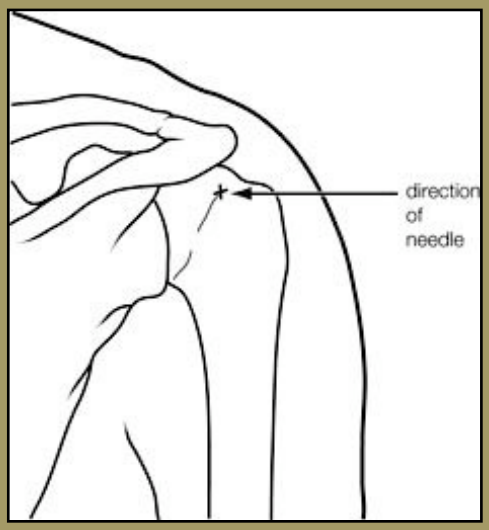

Fig. 1.20 *Posterior view of the subacromial bursa injection site*

The subacromial space injection for subacromial bursitis

The lateral approach is used for localised bursitis when there is localised tenderness over the subacromial space. It is important to angle the needle into the appropriate anatomical plane.

Method

1. Identify the lateral edge of the acromium and select the midpoint.
2. Insert the needle 5–8 mm below the edge of the acromium and angle it between the head of the humerus and the acromium.
3. Inject 1 mL of corticosteriod and 3–5 mL of 1% LA.

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

Integrated Management of Emergency and Essential Surgical Care: IMEESC

This tool was introduced at the recent PNG Society Meetings and copies of the CD's were distributed to all Society Members. If you are a member and didn't get a copy, then let use know and we will see what we can do.

We are trying to organize a workshop for early in 2010 – probably in the Highlands. At this stage we are looking at a maximum of 20 participants over 4 days. There will be both surgical and anaesthetic components. Please register your interest early to avoid missing out. Contact us at: pngruralsociety@gmail.com

Society News

1. For those that have paid up their membership fees for this year – thank you. We have now opened our bank account and will be posting receipts out to you shortly.
2. The constitution has been finalized and we can send out copies by email to anyone who might wish one. The minutes from the inaugural meeting are also available.
3. If you are not a member but would like to become one, fees are K50 per year. Cheques can be made payable to "PNG Society of Rural and Remote Health". Please note that Society activities such as the upcoming IMEESC workshop will only be offered to paid up members of the Society.

Bush Mechanics!

Water in your fuel?

Water in fuel is a common problem in rural PNG. It will very successfully cause extensive (and expensive!) damage to your generator or vehicle if it manages to get all the way into the engine. Here are some tips to help you combat it.

1. If you have to store fuel drums outside, then make sure you store them on their *sides* rather than upright.
2. Keep vehicles undercover. Believe it or not, rain will get in through the fuel cap.
3. You can purchase fuel filters with glass or clear plastic bottoms and have them installed your fuel line (you don't have to remove your existing filter, just add this as an extra). A good example is the R60T made by Raycor. Because water is heavier than diesel, it will sink to the bottom where it can be seen. You can open the tap at the bottom and pump the impurities out.

4. Change your filters regularly.
5. Some generators have fuel tanks built into their frame, usually at the bottom. *Avoid using these sorts of tanks* as impurities will tend to accumulate in them over time where you won't be able to see them, and they can be hard to drain. Instead use fuel drums with the fuel line connected to a drum spear. If you are buying a new generator and it doesn't have this, ask them to make this easy modification.

6. Put a block of wood under the base of the drum to "tip it up" on one side. Do this *on the side of the spear.* Any water in the drum with fall away to the other side and hopefully avoid getting sucked up into the spear.
7. Changes your drums regularly. The spear can easily be removed from one drum and put into a fresh, clean drum.

Acknowledgements: B&M Engineering, Mt. Hagen.

BOOK REVIEW

"Hospital Care for Children – Handbook and CD. (WHO)"

These tools have been a collaborative effort from quite a dizzying array of doctors from all over the world, including PNG's "own" Dr. Trevor Duke who played quite a key role especially in the development of the CD.

The book is very much a practical tool, pocket sized, robust and easy to navigate. It's 11 chapters cover all the major areas of day to day clinical paediatrics including a chapter on surgical problems and an excellent little chapter on Supportive Care. The very practical "Procedures" section is an addendum and full of useful tips.

Again, this is a book designed for practice in resource poor settings, focuses on interventions that are likely to make a real difference, and personally, having not had a strong paediatric background pre-PNG, found it among the most helpful of any books on the topic on my shelf.

The CD is an accompanying tool and really is a fantastic supplement. It follows the same outline as the book but has case studies outlining the principles of each topic. Each case study is in Powerpoint format, designed as the perfect teaching tool for the busy clinician. The case study notes can be printed out in pdf. format for distribution to staff prior to your inservice. There are also excellent videos demonstrating key clinical signs on real patients. We were able to use the CD as the basis of a weekly inservice program for an entire year. The only downside is that there is not yet a version for Mac users, but I won't stoke that fire any further!

Available in a low cost paperback from WHO and TALC.

Contact Us!
pngruralsociety@gmail.com

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

Case Study: 13 y.o boy with airway obstruction

This young fellow was carried in from the remote west of our district where at that time there were no medical services. The family had walked for a full day carrying him by bush stretcher. On presentation he was in severe respiratory distress, with gross suprasternal recession, and stridor that had become ominously soft. The patient was combative, confused, and showing signs of imminent respiratory arrest. The area over his trachea was swollen and tender. The initial working diagnosis was laryngo-tracheitis of unknown aetiology causing upper airway obstruction.

He was rushed to theatre with the intention of performing a tracheostomy. Anaesthesia was induced, the patient paralysed and a small endotracheal tube was gently inserted. Fortunately this was achieved relatively easily and the anaesthetist was very relieved to find that subsequent ventilation was fairly easy, suggesting the tube had bypassed the major obstruction. In hindsight this probably was a fairly risky anaesthetic strategy and insertion of tracheostomy under local anaesthesia may have been wiser, although the combativeness of the patient would have made this a difficult option as well.

During tracheostomy, dissection was somewhat difficult as the pre tracheal tissues where swollen and inflamed making the landmarks obscure. The trachea itself was quite soft and the whole procedure had a quite unusual "feel". The endotracheal tube was withdrawn proximally until the tip could be seen through the stoma, and then a trachostomy tube inserted, the anaesthetic circuit switched across, and then the E.T. tube withdrawn altogether. Once we were happy that everything was secure, he was awoken, the circuit removed and replaced with a filter on the tracheostomy. Spontaneous respiration being satisfactory, he was transferred to the ward.

He was commenced on broad spectrum IV antibiotics, and over the next 10 days his condition steadily improved. The proximal obstruction could be "tested" by blocking off the tracheostomy. When he was able to breathe freely, it was removed and he was discharge home.

Although the case had a very good outcome, I confess that I still had really no idea what the underlying aetiology might have been, and it remained a conundrum for me for some years. Any ideas? Conclusion: Next page

NATIONAL NEWS.

In this section we want to try to pass on information of happenings around the nation that might affect your area or your practice. It might be new developments in government or within NDOH, changes to the way donors are operating, or new potential streams of funding. Once again, we are likely to rely heavily on your input for this, so keep the emails coming. In this edition we highlight changes to Medical Stores and brief you on the new strategy for the 2010-2050 Health Plan.

Changes to Medical Stores.

Details of these changes are still somewhat sketchy. What is clear is that the whole process of procurement and distribution is being reviewed. One of the recommendations currently before NDOH is that parts of the process be privatized (ie. a private contractor be paid to be responsible for relevant sections of the chain); Currently our aid post kits are put together by such a company (based out of Queensland).

Which parts of the process are up for consideration is not clear, but it is possible that the entire procurement and distribution chain may change hands. It is also being discussed that the network of Medical Stores depots be rationalized. Initially it was being discussed that Moresby and Lae become the new "super depots", meaning Hagen, Wewak, Madang and Rabaul would be closed. The latest information we have is that Hagen may survive this culling, but that the others are slated for either downgrading or closure. Presumably there would have to be some sort of place remaining for filled orders awaiting pickup to be stored in the provinces. How orders would be placed etc. is not yet clear. What is clear is that any such changes have the potential to very significantly effect availability of medical supplies – for better or worse.

We can't be sure yet exactly how far this process has gone, and whether any final decisions have been made, but it is appropriate that it be open and transparent, and done with proper consultation. Forward your comments to us, and we can try and pass them on to NDOH.

Strategic Vision for the National Health Plan 2011-2050

The current health plan expires at the end of next year. Many of you may say "so what?" The Health Plans do affect the way we operate

NATIONAL NEWS (CONT.)

because, apart from anything else, your projects and priorities will find it hard to attract funding unless they fall in line with the objectives of the Plan. Annual Activity plans (which form the basis for things like HSIP funding distributions) are made based on the overall 10 year plan.

This time around, there are very significant changes being mooted. We had a chance to be introduced to these possible changes, and to give feedback at the recent Consultation Workshop in Goroka. I will outline the core elements below. Obviously we can't go into detail so please contact us if you want more information.

- Propose 4 High Level Tertiary Care hospitals in Pt. Moresby. (PMGH, Paeds, Women's, Psychiatry). Role – high level tertiary care, model best practice, teaching
- 4 Regional Specialist Hospitals – Dual Role. National specialist and provincial hospital. Include all clinical specialties but with extra special interest foci – Mt. Hagen (Trauma), Angau (Oncology), Nonga (Lifestyle diseases), and Central (Infectious Diseases)
- Provincial Hospitals – 14 provinces targeted over 20 years. Minimum specialist services include Internal Medicine, Surgery, Paediatrics, O&G, A&E and Anaesthesiology.
- District Hospitals – 1 in each of the 89 districts. Staffed by one rural health specialist and at least one other general M.O. Rolling infrastructure upgrade program. Services provided: General surgery, Maternal and child health, basic pathology as well as health promotion programs.
- Health centres/Aid posts – HC will either be upgraded to District Hosptial or changed to the new Community Health Post (CHP). Aid posts will be reopened and refurbished initially then gradually changed over to become CHP's. The CHP's become the new "entry level" facility and the plan is to have each one eventually staffed by people with midwifery, paeds and general nursing skills. It is to be introduced in a phased manner – Madang, Central, Simbu, Milne Bay and West Sepik first.

  These plans are still up for consultation there is still time for input. Our thanks to Mrs. Elizabeth Gumbaketi for the invitation to contibute. If you wish to comment, contact us, or Elizabeth directly at elizabeth_gumbaketi@health.gov.pg

Case Study: Continued

Laryngotracheal Diptheria

Diptheria can present in several forms. Severity of disease tends to depend on the extent and site of the local lesion, and the degree of absorption of the exotoxin which can cause neuropathy and potentially fatal myocarditis.(2)

Mild nasal disease may present as a unilateral bloody discharge with minimal systemic symptoms. Tonsillar disease will reveal the classic ivory white or grey-yellow pseudomembrane, which is firmly adherent to the underlying tonsil. This can spread to involve the entire pharynx. The "bull neck" appearance often accompanies. These patients tend to be at highest risk of severe exotoxin absorption.

Laryngotracheal diptheria may be primary or secondary to pharyngeal disease. Absorption of the C. diphtheriae toxin may be minimal so the major signs related to the airway obstruction caused by the build up of pseudomembrane. If pharyngeal disease is present, the diagnosis should be clear. If not, then differentials might include foreign body obstruction, viral or bacterial laryngotracheobronchitis. (2)

In this case, the clinical history excluded foreign body, and the age of the patient made significant obstruction from viral disease unlikely. The degree of swelling and tenderness of the tracheal tissues also made me feel that bacterial disease was the likely cause. Although we were never able to confirm the diagnosis, it would seem that diptheria was an explanation certainly worth considering. We met him by chance a few years later on the trail!

Rural Doctor Profile: Adeline Sitther.

Hi, my name is Adeline Sitther, but I am more often referred to simply as 'Dr Addy'. I am an Indian doctor and I have been working with the Evangelical Church of PNG in Rumginae, Western Province since 1997.

Working in a rural hospital is both challenging and exciting. When I wake up every day, I never know what kinds of patients I will see or what 'non-medical' trouble shooting I will be called on to do. My days are quickly filled with Ward rounds, attending to complicated obstetrics (including Caesareans), emergency and essential surgery, training and administration. The excitement for me is seeing what God can accomplish in spite of my basic skills and our limited resources and being able to make a difference to many people 'out bush' who would otherwise have no access to hospital care. With the HF radio network of Christian Radio Missionary Fellowship and more recently the Health Radios, we are called upon several times a week to offer advice in emergencies and arrange medical evacuations ('medivacs') in addition to our thrice weekly 'medical sched'. Some of my best memories involve visits to remote Aid Posts and Health Centres, encouraging the staff and seeing patients.

I love to teach and the Community Health Worker Training school at Rumginae provides ample opportunities to impart my knowledge and skills. Besides this, there are abundant opportunities to share information with our clinical staff.

I am often asked what my 'speciality' is. Sometimes, I respond by saying I am a, 'Jack of all trades and master of none!' In the rural hospital setting one has to be prepared to tackle anything from malnutrition to infectious diseases, to obstetric complications, to trauma and surgical emergencies. I am excited about the MMed (Rural) programme which will give doctors some added input into all the broad range of specialities they are called to manage. I have spent hours reading text books, performing surgeries with the book open and am thankful to specialists who offer advice over e-mail. Above all, I am grateful to the Lord on Whom I am increasingly dependent as an instrument in His hands, bringing His healing into areas of need. And the satisfaction of being where God wants me far outweighs the constant difficulties I face.

Contact Details: **E-mail:** asitther@gmail.com

Skype: adeline.sitther **Radio:** Rumginae doctors can be contacted through CRMF radio on Frequency 5895 Mon, Wed, Fri 12-1pm or through CRMF between 7am to 7pm.

Silip i dai! Anaesthetics Corner.

Halothane and Thymol.

Most anaesthetic machines in PNG use Halothane as the volatile anaesthetic. Halothane is still the only volatile freely available through Medical Stores in PNG.

Many ATO's (and some anaesthetists!) are unaware that Halothane comes mixed with 0.01% Thymol as a preservative. Most of the Thymol does not volatilize along with the Halothane, and so will accumulate over time as the Halothane vaporizes and is refilled.

A study in Finland in 2007 showed that Halothane vaporizers that were not regularly drained, had up to 20 times the normal levels of Thymol present (1). Small amounts of Thymol will enter the anaesthetic gas stream and can therefore theoretically affect patients.

Thymol has been shown in vitro to affect the function of calcium channels in rat cardiac muscle and there is anecdotal evidence of serious cardiac arrhythmias and death in humans precipitated by high levels of thymol in anaesthetic gases.

Halothane vapourizers should be regularly drained to prevent thymol accumulation. How regularly? – depends on how often you are refilling. Some authors say weekly.

Acknowledgements: Dr. Steve Lutz – Mambisanda Hospital

JOB VACANCIES.

Need a Doctor at your hospital? Send your information to pngruralsociety@gmail.com and let us help you fill it free of charge by publicizing in "The Garamut".

Sources.

1. Rosenberg et al. *Accumulation of Thymol in Halothane Vapourizers* Anaesthesia 2007; 39: 581-583
2. "Infectious Diseases" Edmond et al 3rd Ed, Mosby-Wolfe 2000
3. "Practice Tips" (5th Edition) Murtagh J.

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