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President's Report Anthony van Zwieten

Welcome to the final 2013 edition of our newsletter the "Tissue Paper".

The HGQ committee would like to thank everyone who has helped put together the three editions this year. Emma and Jerres have done a fantastic job to make this a quality Histotechnology-based newsletter. It's been great to have a range of contributors covering a wide range of histology and science based fields.

We had a great turnout at the AGM earlier this month with two interesting talks from Drs Jason Stone and Michelle Dennis from QML. Special thanks to David Gan and Jason Tu for their help

in organising a fun night out at the Norman Hotel.

The addition of new committee members is also very exciting for our group and we look forward to working with them in 2014 with priority being a day workshop held in Brisbane mid-year for new and existing HGQ members. Stay tuned for more information on this very soon.

The HGQ is the host for the upcoming 2015 National Histotechnology Conference to be held in Brisbane over the June long weekend. We are excited to be sharing the Brisbane Convention and Exhibition Centre with the International Academy of Pathology meeting. With an expected combined



participation of 1500 scientists, registrars and pathologists across two separate programs this will be a unique opportunity for all attending. We will be releasing more information very soon so pencil the date in your diary or smart phone.

I wish everyone a merry Christmas and successful 2014 and look forward to catching up with you in the new year.

Editor's Note Emma Hughes

Here we go with the final Tissue Paper of 2013.

In this volume we have part two of Dr Brian Miller's fascinating article on the work of the OSSAA in East Timor.

We have an informative article from Helen O'Connor on the Bachelor of Medical Laboratory Science at Queensland University of Technology.

There is the second in our series of Histology Quizzes with a new Matchup Quiz on Basic Histology Chemicals and Special Stains. Also included are the answers to the questions posed in Volume 35 of the Tissue Paper.

Finally, there is any article on all the different sorts of Gastrointestinal Cancers.

May I now take my chance to wish all my readers a very Merry Christmas and a Happy New Year to you all.



Emma Hughes - Editor



Jerres Alcober - Secretary

Secretarial Report Jerres Alcober

Hello to all our readers. As 2013 comes to a close, 2014 is shaping up to be quite an active year for the HGQ.

The HGQ will be hosting the following events next year (tentative dates): Scientific meetings (Apr, Aug, Dec), AGM (Dec), Social Event (Oct) and a Workshop (Jun). The committee will also be piecing together the 2015 joined HGQ (national) & IAP (international) conference in 5-7 Jun 2015.

QML recently hosted the AGM and 3rd scientific meeting for 2013. Thank you to QML and all other labs (SNP-Taringa; PQ-PAH) and individuals involved for another year of successful and well-attended events. If your lab would like to get involved in hosting the AGM and/or scientific meeting, please contact us.

HGQ Membership is "Free" and includes many benefits covering the calendar year (1st January – 31st December). Get online to join. It's easy as pie.

For all the latest updates on what's happening in the world of the HGQ, please check us out on www.hgq.org.au

Hope to catch up with you in 2014. Have a safe & wonderful festive season.

Enjoy!!

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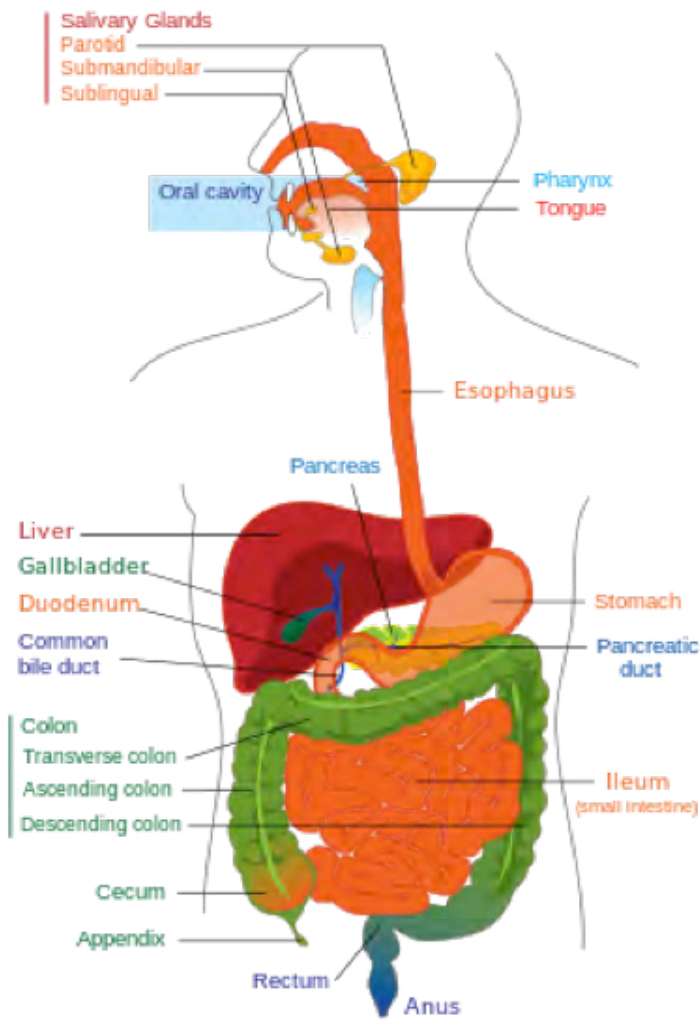
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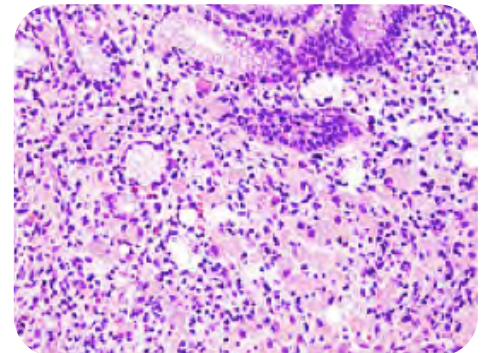
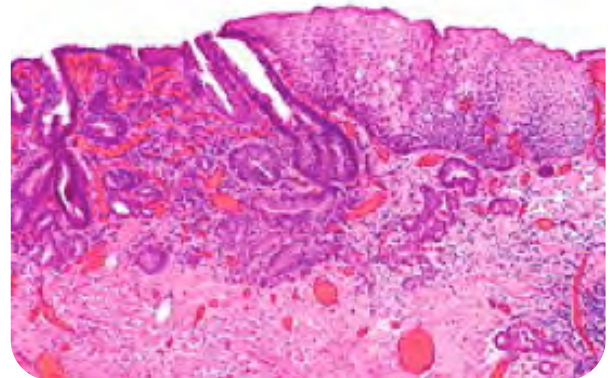




Left - Upper & Lower Gastrointestinal tract

Below Top - Micrograph of an Oesophageal adenocarcinoma (dark blue – upper-left of image) & normal squamous epithelium (upper-right of image); H&E stain

Below Bottom - Gastric signet ring cell carcinoma. H&E stain



Gastrointestinal Cancer

Emma Hughes

Gastrointestinal cancer refers to malignant conditions of the gastrointestinal tract (GI tract) and also accessory organs of digestion, the liver, gallbladder and pancreas. The symptoms relate to the organ affected and can include obstruction (leading to difficulty swallowing or defecating), abnormal bleeding or other associated problems. The diagnosis often requires endoscopy, followed by biopsy of suspicious tissue. The treatment depends on the location of the tumour, as well as the type of cancer and whether it has invaded other tissues or spread elsewhere. These factors also determine the prognosis.

Overall, the GI tract and the accessory organs of digestion are responsible for more cancer-related deaths than any other system in the body. There is significant geographic variation in the rates of different gastrointestinal cancers.

Oesophageal cancer is the sixth-most-common cancer in the world, and its incidence is increasing. Some three to five males are affected for each female. An "Oesophageal cancer belt," in which the incidence of Oesophageal SCC is more than a hundred times that of adjacent areas, extends from northeastern China through central Asia to northern Iran. Ethiopia also has a notably high incidence. There are two main types of Oesophageal cancer—adenocarcinoma and squamous cell carcinoma. Worldwide, the incidence of each type is about the same, but in developed countries like North

America and Europe adenocarcinoma is the more common.

Cancer of the Oesophagus is often detected late inasmuch as there are typically no early symptoms. Nevertheless, if the cancer is caught soon enough, patients can have a five-year survival rate of 90% or above. By the time Oesophageal cancer is usually detected, though, it might have spread beyond the Oesophageal wall, and the survival rate drops significantly.

Cancer of the stomach, also called **Gastric cancer**, is the fourth-most-common type of cancer and the second-highest cause of cancer death globally. The most common type of gastric cancer is adenocarcinoma, which causes about 750,000 deaths each year. Important factors that may contribute to the development of gastric cancer include diet, smoking and alcohol consumption, genetic aspects (including a number of heritable syndromes) and infections (for example, *Helicobacter pylori* or Epstein-Barr virus) and pernicious anemia.

Pancreatic cancer is the fifth-most-common cause of cancer deaths in the United States, and the seventh most common in Europe. These cancers are classified as

endocrine or nonendocrine tumors. The most common is ductal adenocarcinoma. The most significant risk factors for pancreatic cancer are advanced age and smoking. Chronic pancreatitis, diabetes or other conditions may also be involved in their development. Early pancreatic cancer does not tend to result in any symptom, but when a tumour is advanced, a patient may experience severe pain in the upper abdomen, possibly radiating to the back. Another symptom might be jaundice.

Pancreatic cancer has a poor prognosis, with a five-year survival rate of less than 5%. By the time the cancer is diagnosed, it is usually at an advanced, inoperable stage. Only in about fifteen to twenty percent of patients is curative surgery attempted. Pancreatic cancer tends to be aggressive, and it resists radiotherapy and chemotherapy.

People get **Liver cancer** (also called hepatocellular carcinoma, HCC or hepatoma) typically from a prolonged Hepatitis B or C infection or as a result of cirrhosis from chronic alcoholism. Liver cancer may bring about yellowing of the skin and eyes (jaundice), itching (pruritis), or cause a build up of fluid in the abdomen (ascites). A person may feel an enlarging mass, or the cancer might be revealed by abnormal liver function tests

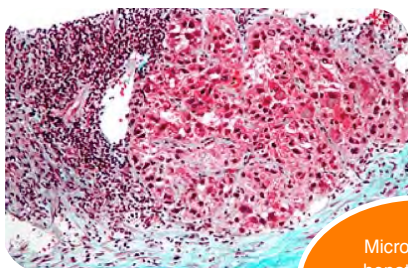
A clinician might order a biopsy, an MRI or a CT scan, and a patient might be monitored through blood tests (including alpha-fetoprotein, liver-function tests or ultrasound. These cancers are typically treated according to their TNM stage and whether or not cirrhosis is present. Options include surgical resection, embolisation, ablation or a liver transplant.

Cancers of the gallbladder are typically adenocarcinomas, and are common in elderly women. **Gallbladder cancer** is strongly associated with gallstones, a porcelain gallbladder appearance on ultrasound, and the presence of polyps within the gallbladder. Gallbladder cancer may manifest with weight loss, jaundice, and pain in the upper right of. It is typically diagnosed with ultrasound and staged with CT. The prognosis for gallbladder cancer is poor.

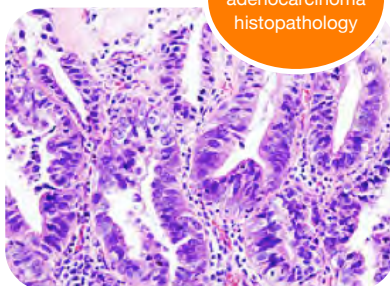
Other Cancers - MALT lymphoma is a cancer of the mucosa-associated lymphoid tissue, usually in the stomach.



Micrographs of normal pancreas, pancreatic intraepithelial neoplasia (precursors to pancreatic carcinoma) and pancreatic carcinoma. H&E stain.



Micrograph of hepatocellular carcinoma. Liver biopsy. Trichrome stain.



Gallbladder adenocarcinoma histopathology

Gastrointestinal stromal tumors represent from 1% to 3% of gastrointestinal malignancies. Cancers of the biliary tree, including cholangiocarcinoma.

Colorectal cancer is typically an age-related disease: It typically originates in the secretory cells lining the gut, and risk factors include diets low in vegetable fibre and high in fat. If a younger person gets such a cancer, it is often associated with hereditary syndromes like Peutz-Jegher's, hereditary nonpolyposis colorectal cancer or familial adenomatous polyposis. Colorectal cancer can be detected through the bleeding of a polyp, colicky bowel pain, a bowel obstruction or the biopsy of a polyp at a screening colonoscopy. A constant feeling of having to go to the toilet or anemia might also point to this kind of cancer.

Use of a colonoscope can find these cancers, and a biopsy can reveal the extent of the involvement of the bowel wall. Removal of a section of the colon is necessary for treatment, with or without chemotherapy. Colorectal cancer has a comparatively good prognosis when detected early.



Example of an invasive colorectal cancer

An important anatomic landmark in anal cancer is the pectinate line (dentate line), which is located about 1-2 cm from the anal verge (where the anal mucosa of the anal canal becomes skin). Anal cancers located above this line (towards the head) are more likely to be carcinomas, whilst those located below (towards the feet) are more likely to be squamous cell carcinomas that may ulcerate. Anal cancer is strongly associated with ulcerative colitis and infections from HPV and HIV. Anal cancer may be a cause of constipation or tenesmus, or may be felt as a palpable mass, although it may occasionally present as an ulcerative form.

Anal cancer is investigated by biopsy and may be treated by excision and radiotherapy, or with external beam radiotherapy and adjunctive chemotherapy. The five-year survival rate with the latter procedure is above 70%.

A **Gastrointestinal Carcinoid tumour** is a rare, slow-growing form of cancer that affects certain cells in the lining of the stomach and intestines. The cells it affects make hormones that regulate the production of digestive juices and muscles that move food through the stomach and intestines. This kind of cancer usually occurs in the appendix, small intestine, or rectum. Its presence is associated with an increased risk of cancers affecting the other parts of the digestive system. It is usually treated with surgery.

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QUT Bachelor of Medical Laboratory Science

Helen O'Connor

The Bachelor of Medical Laboratory Science is a four year course, is multidisciplinary and incorporates all areas of clinical pathology. This degree was introduced in Semester 1, 2012 and replaces the three year Bachelor of Applied Science, Medical Science which is being phased out over 2012 and 2013. The new course has been designed in consultation with managers and academics in pathology and research laboratories. It provides a sound understanding of the fundamental concepts that underpin medical laboratory science and students gain advanced knowledge of the latest diagnostic techniques and have an expanded professional placement program.

A Medical Laboratory Science degree, accredited by the Australian Institute of Medical Scientists, is the preferred qualification for employment in the pathology industry as a medical laboratory scientist. The Bachelor of Applied Science, Medical Science was accredited by AIMS and the new Bachelor of Medical Laboratory Science has provisional accreditation and is about to be reviewed for the next step in the final accreditation process. More than 90 per cent of QUT graduates seeking employment within the pathology industry are successful within months of graduation.

Rationale for new 4 yr program

- Introduces a semester long professional placement (work integrated learning internship) in recognised laboratories that will consolidate knowledge and skills, provide real world experience and access to mentoring from practising medical scientists. It will also as help students develop networks within the profession. Students may also be able to complete part of their work placement in regional Australia or an international laboratory.
- Students still need to cover basic concepts and gain knowledge and skills in all clinical disciplines but the course has allowed updating of units and now includes additional units:-
 - Molecular Pathology and Cytogenetics (playing increasingly important roles in medical science)
 - Health Informatics – data handling in Pathology labs
 - Contemporary Issues in Medical Laboratory Science - latest advances in medical science, current techniques and technology and multidisciplinary approaches to complex cases
 - Intercultural Health in Clinical Practice – Australia has a diverse and changing population so this unit looks at disease differences b/w different groups, working within different cultural groups and organisations, regional and remote labs
 - allows students to chose an elective subject – business, research techniques, marketing, communication in science,
- The majority of medical laboratory course in Australia are 4yr

"Introduction To Medical Laboratory Science"

Over the four years of study students gain specialised knowledge and skills of the various clinical disciplines. Units have a theoretical component and a practical laboratory component in which students become familiar with techniques, equipment and instruments that are used in pathology laboratories and research.



A holistic/integrated approach is used right from the start of the course. In their very first semester students undertake the 'Introduction to Medical Laboratory Science' unit. This unit presents the students with a scenario where a patient initially presents with chest infection but laboratory investigations reveal a more serious condition that requires ongoing and varied pathology tests ie introduces students to the concept of multidisciplinary approach. The patient has 'specimens' that have to be tested in the microbiology lab, the cytology lab, the histopathology lab, the biochemistry lab, the haematology lab, the blood transfusion lab. All the pracs revolve around the patient and introduce the students to the basic techniques of each laboratory as well as emphasising the need for constant attention to detail to ensure the patients specimen and information is not lost or mixed up with another patient.

For the histology prac I needed to source tissue that fitted in with the patient's "diagnosis" and am really grateful to David Gan at QML, Anthony from PCH and Mike Walsh from SNP for their advice and support. I have enough blocks to keep us going for the next couple of years (as long as the lecturers don't change the scenario!). The students did a couple of H&E's and then looked at their slides under the microscopes to try and compare normal and abnormal tissue. We also took them through the "workflow" once a specimen comes in the lab including basic dissection, a quick look at embedding and microtomy and the use of special stains and other techniques. All of these aspects are covered in much greater detail in the two Histopathology units later in the course.

The students also do a tour through a major pathology laboratory so that they get to see the techniques that they have been introduced to at QUT being used in the real world. Last year the group were taken through the QML lab at Murrarie and this year they went to SNP at Taringa – quite an eye-opener for the students to go through these big laboratories. Again, the time and effort provided by QML and SNP is very much appreciated.

The feedback from the students who have completed this unit is very positive – they really enjoy being able to get into each clinical laboratory and doing hands-on activities as part of their initial university experience. They find it very motivating and it also helps them understand the importance and role of the 'drier' foundation units such as maths and chemistry.

Professional recognition for Medical Laboratory Science Graduates

Naturally the most important professional group is the Qld Histotechnology Group. Anthony van Zwieten has been taking some lectures in 2013 and has encouraged students to join the group while still studying and to attend the scientific meetings. Ricky Palit and Natalie Ech came to the meeting at PAH and enjoyed the talks, noodle boxes and tour through the PAH Histo lab. Copies of the Tissue Paper are always available on the QUT Histopathology notice board.



QUT
Awards
Night 2013

Upon graduation students from QUT are immediately eligible for membership with the Australian Institute of Medical Scientists, and will have completed the academic and work placement requirements for admission as full members. Depending on the clinical discipline(s) of employment, students will be eligible to apply for membership of various professional organisations including the Australasian Association of Clinical Biochemists, Australian Society of Microbiology, Australian Society of Cytology, Human Genetics Society of Australasia, Haematology Society of Australia and New Zealand, Australian and New Zealand Society of Blood Transfusion and Australian Society of Thrombosis and Haemostasis.

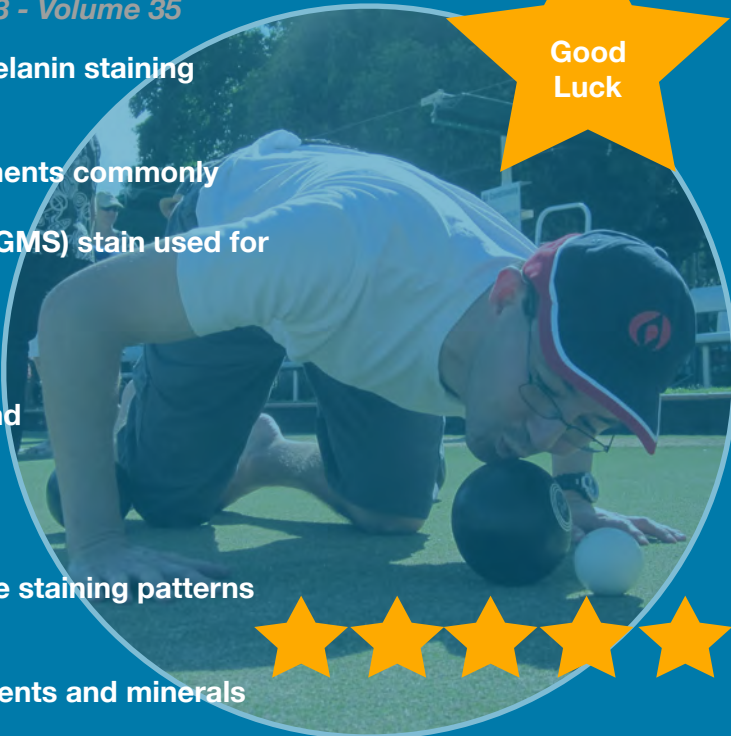
The QUT Medical Laboratory degree course provides an excellent foundation for entry into post graduate studies. Every year graduates go onto medical studies at universities around Australia. Others undertake further studies in biomedical and clinical research. Our graduates are currently working as researchers in areas such as cancer diagnosis, malaria, virology, stem cells, infectious diseases, immunology, transfusion science, eye disease, reproductive medicine and molecular biology.

SPECIAL STAINS QUIZ - 20 MCQ - **ANSWERS**

Answers to "Tissue Paper" September 2013 - Volume 35

1. What is the most specific method of melanin staining
2. When is a VonKossa stain used?
3. What is a PAS stain useful for
4. Where are lipochrome/lipofuscin pigments commonly found
5. What is a Gomori methenamine silver (GMS) stain used for
6. What are the types of Mucin stains
7. Where is melanin found
8. How does Schmorl's method work
9. What is a special property of urates
10. What stains can have a high background
11. What is the use of a TRAP stain
12. What stains are used for copper
13. What are the types of melanin stains
14. How does DOPA-oxidase work
15. What are traditional classification of the staining patterns of biogenic amines
16. What is a Warthin-Starry stain used for
17. What are examples of exogenous pigments and minerals
18. What does a PAS stain visualize?
19. How are minerals visualized?
20. How is silica visualized?

Good
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Part Two - General Surgical Visit to Halilulik, West Timor, in Nusa Tenggara Timur

Dr Brian J. Miller, AM FRACS General Surgeon

Interpretation

We have now been fortunate enough to have Dr Fifi Djatmiko with us as our interpreter on a number of visits to several hospitals in NTT including Soe, Larantuka and Halilulik. Fifi's great assets to us are her expertise in paediatric medicine and her outstanding organizational abilities. She has special insight to the difficulties and the nuances that we encounter during these visits as a result of her medical background. Her consistent hard work, and her calm demeanour were as evident as ever on this visit.

Fifi also handled, labelled and packed up all of our formalized histological specimens this time. The care with which she entered the operative cases and consults on her iPad was most impressive. It's becoming hard to imagine doing one of these visits without her skills! To be noted is that Fifi made a special effort to stand back in theatre in order to let the local doctors do all the operative assisting with Brian. As a budding clinician herself it was quite apparent that Fifi gained considerably from helping to assess the outpatients, many of whom were children, with Brian during consultations.

Much of the incentive for young Indonesian doctors such as Fifi, Yose, Arto and Dion to come with us as interpreters on these visits is their own clinical interest.

My feeling is that this is a mutually beneficial relationship which should be duly acknowledged and encouraged. Our teaching opportunities were considerably enhanced by the presence of all the junior doctors, many of whom travelled from Java to be at Halilulik during this time. They also helped considerably with interpretation from time to time.



Dr
Fifi and Sr
Cath setting
up in theatre

Workload

Consultations:

There was a total of 120 patient consultations carried out by Brian during this visit.

Operations:

A total of 64 surgical procedures was performed during the visit. Thirty four of the procedures were larger operations done by Brian in theatre. The other thirty were minor procedures done under LA by Dr Joyce and some of the junior doctors in OPD.

The major operations included several thyroidectomies, a laparotomy and removal of a large ovarian cyst, another laparotomy with small bowel resection and anastomosis for fistula resulting from a strangulated femoral hernia, a Grade IV left axillary burn-scar release and skin grafting, orchidectomy and numerous hernia operations for both small children and adults. Rigid sigmoidoscopy was done for a patient with rectal bleeding. Another gastroscopy was performed on this visit for a patient with suspected helicobacter infection.



Top Left - Dr Brian
performing a
gastroscopy in theatre
for suspected
Helicobacter infection.

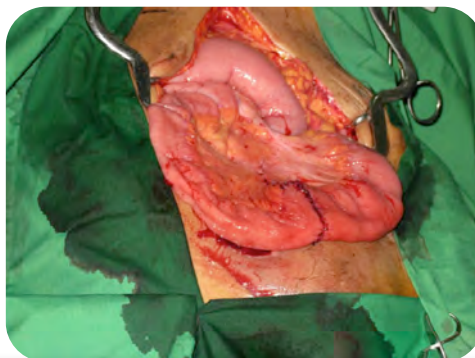


Left - Dr Brian planning the grade 4 axillary burn-scar
release and skin grafting procedure



Right - 18 year old patient with severe burn-scar
contracture, following an accident involving an oil lamp 5
years ago. She underwent release and skin grafting.

A 30 year old female patient presented us with a strangulated femoral hernia, which had gone on to rupture below the inguinal ligament with consequent profuse leakage of corrosive small bowel contents from an enterocutaneous fistula. She was transferred to us after several days in Kefamenanu Hospital, and required considerable rehydration overnight prior to her laparotomy the next day.



30 year old female with profuse bowel leakage for 2 weeks from a strangulated femoral hernia.

Bottom Left - At laparotomy, the ruptured bowel is being examined prior to its removal.

Bottom Middle - The perforated length of small bowel has been excised, and the ends of the bowel have been anastomosed.

Far Right - The patient recovering satisfactorily on the ward on Day 2 post-op.

Complications:

There were three early post-operative complications that occurred during this visit:-

1. One case of urinary retention following a left inguinal hernia repair in a fourteen year old boy, resolved by passage of in-and-out urinary catheter.
2. Following burn-scar contracture release with SSG in an 18 year old girl, an incident involving a two-minute episode of extreme bradycardia following the administration of IV neostigmine given to reverse the muscle relaxant, which responded promptly to additional IV atropine and a brief period of ontable CPR. This event will be detailed more extensively by Andy in his report. To be noted is that the patient recovered promptly while she was still in theatre with no apparent ill-effects.
3. A post-thyroid lobectomy bleed. This occurred before the patient had been wheeled out of the theatre at the conclusion of a left thyroid lobectomy. The gland had been very vascular, but the operative field was dry at the end of the case. Upon transfer onto the trolley from the operating table a quantity of blood appeared via the operative drain totaling about 200 mls. This was accompanied by some swelling of the neck. The patient meanwhile remained intubated on the trolley. The decision was made to transfer the patient back onto the operating table, resume general anaesthesia and re-explore the neck at that stage. Some additional clot was evacuated from the operative wound. However no definite bleeder could be found, and the neck was re-sutured uneventfully. The patient recovered well over the next few days with no further complication.

Progress & Education

There was a gratifying maintenance of the improvement this time in many aspects of care that had been instituted on previous visits both in theatre and on the wards. Cath was able to instill a better understanding of aseptic technique, surgical instruments and intra-operative counts, while Andy's emphasis was on airway skills and spinal anaesthesia.



Dr
Andy
with Nurse
Addiss and
Nurse
Ricardo in
OT



Ricardo
being
instructed in
spinal
anaesthesia
by Andy.



A popular knot-tying exercise for all the junior doctors with Dr Brian on the last day at Halilulik.

Running subcuticular Monocryl suturing, intra-operative anatomy and proper clinical assessment were examples of instruction by Brian. Another tutorial in onehanded knot tying for about 10 junior doctors was conducted with enthusiasm, held in the theatre foyer on the final afternoon.

On one evening a PowerPoint presentation was given by Brian after we had finished the day's work, on the topic of "Abdominal Trauma".

Ward rounds were conducted twice a day by Brian accompanied by Fifi, Sister Angela and many of the junior doctors particularly Dr Intan, Rudy, Ilona and Donni as well as the nursing staff. In the morning Andy and Cath would go to theatre to prepare for the first case and in the evening at the conclusion of operations, after dinner, Andy was frequently able to join the ward round to see some of the postoperative cases.

We were fortunate on this visit to have no transport delays, and no persistent equipment failures. One of our team members was afflicted by a persistent health problem which necessitated taking a day off from working in theatre. Cath did a great job looking after our out-of-pocket expenses as she has done on previous visits. We were visited for afternoon tea by Dr Suroso from Atambua Hospital accompanied by his wife. Of note is that Dr Suroso has offered to attend the Halilulik Hospital after our departure and help with the post-operative care of the remaining patients.

On the final day, we discussed with Sister Angela about her vision for future surgical visits to Halilulik Hospital. She made it very clear that her staff eagerly anticipate the general surgery OSSAA visits. They are looking forward to working with Bob Sillar's team this August.

At the farewell ceremony Sister Angela and her staff presented each member of our team with a special gift of a locally hand-made Indonesian shirt, and she thanked the whole team sincerely for their clinical effort this time. Special "Certificates of Attendance" were presented to each of the junior doctors and the nursing staff who had participated in the operations. These were prepared by Sister Angela and signed by the OSSAA team members.

We were also given a folder containing letters of gratitude from many patients that we had treated during the visit. Dr Fifi has kindly translated some of these, and two are reproduced below:-

Patient name:- Yosep Afoan
Date of surgery 27/2/13. Repair of large hydrocele.
"First, praise to the Lord that I was able to reach Halilulik Hospital safely. I truly believe that God has sent Australian specialist doctors, nurses, midwives and medical staff at Halilulik Hospital to take care of me through this surgery. Now that I'm healed, I cannot express my gratitude enough. I won't be able to repay all of this other than the words "Thank you". May God bless and repay everything back."

Patient Name:- Syprianus Sisuk
Date of surgery 28/2/13. Repair of large left inguinal hernia.
"Wishing that this work would continue on as this will help people who live in Belu Regions and surrounds. Thank you to the OSSAA specialist doctors from Australia, to the local doctors, nurses, nuns, and the security guards at Halilulik Hospital. The service was great towards patients and patient's family."

Dr Brian emphasized that we again found Halilulik Hospital to be a very functional and happy place, and it is a great privilege for the OSSAA team to be able to come and work here.



An evening lecture on the Management of Abdominal Trauma, for the doctors and nurses.



Return journey

It was not possible on this occasion to make use of Susi Airlines largely because the timing of their flights did not dovetail with the Garuda Airlines flights from Kupang back to Denpasar. Also the weather was somewhat inclement during this visit and Susi Airlines could not guarantee that they would be flying at all. On the final Tuesday morning three concluding operations were done in theatre and our equipment was packed up by Sister Cath. Various pieces of equipment were returned to Australia in particular some of the anaesthetic drugs and the gastroscope.

This was followed by the farewell ceremony with Sister Angela and her staff, and we departed for Soe in a commercial vehicle hired by the hospital to transport the team. We spent a comfortable night at the Bahagia II Hotel in Soe. The journey from Halilulik took approximately 3 hours and we were in Soe by 6.00 pm. We went to a local restaurant for the evening meal and the following morning we had breakfast in the hotel before leaving for Kupang in the same vehicle.

We caught the midday plane from Kupang to Denpasar uneventfully and had a few hours stopover at the Vira Bali Hotel before Brian and Andy returned to Australia on the overnight flights to Brisbane and Adelaide respectively. Cath and Fifi both stayed on in Indonesia for a few more days to see friends and family.

Summary

Whilst our time at Halilulik Hospital was brief on this occasion, a total of seven days with six full days operating, we believe that this visit was a beneficial experience for the Sisters, staff and the patients at Halilulik Hospital. The longterm plan for Halilulik Hospital is one of progressive rebuilding of the wards and other facilities, which has commenced with refurbishment of some of the older wards into the current outpatient and screening area. This will be combined with a new X-ray Unit when funds become available. Halilulik Hospital remains eminently suitable for future visits by general surgical OSSAA teams. Many patients were helped with life-changing procedures that they would have had no chance of undergoing otherwise. We were able to offer considerable skills enhancement to the theatre staff, the nurses on the wards and to the many junior doctors that we met this time.

It is encouraging to have had such positive responses from both Sister Angela and Dr Joyce with respect to planning our next visit with this team to Halilulik Hospital in March 2014. On that occasion we are hoping to bring Dr Ian Martin, general surgeon, and Dr Peta Lorraway, anaesthetist, who both work at Princess Alexandra Hospital in Brisbane, with a view to introducing them to some of the challenges and the rewards of general surgery at Halilulik Hospital.



Left - On
evening ward rounds with Sister Angela, Dr Brian, and Fifi.



Above -
Brian & Andy with Dr Suroso, general surgeon who was visiting from Atambua Hospital.



Middle
- Dr Joyce presenting gifts to members of the OSSAA team.



Below -
Theatre staff photo with the OSSAA team, Dr Joyce, the Sisters, junior doctors & nurses



Right -
Sister Cath presenting Ricardo with his "Certificate of Attendance". Atambua Hospital.

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"Let's get Quiz-ical, Quiz-ical"

Basic Histology "Matching" Quiz - 20 Questions

Write the letter corresponding to the correct matching number in the space provided [Emma Hughes]

- | | | | |
|--------------------------|---|---|---|
| <input type="checkbox"/> | 1. What are the main reagents and their purpose in Hall's bilirubin stain? | A. Strong acids and certain fixatives will cause DNA to lose its ability to bind methyl green. Pyronin is not specific for RNA, cartilage, osteoid, keratin, eosinophil granules, and mast cell granules will also stain. | M. Progressive, aluminum sulfate, sodium iodate, ethylene glycol prevents surface precipitates, can be used immediately, but better left to ripen for a week at 37C., stains goblet cells, esp. in mucin. GillIII is used on Glycol Methacrylate sections |
| <input type="checkbox"/> | 2. What are the major reagents used in the Prussian blue stain? | B. Formalin fixed sections need to be mordanted in zenker, but staining still will not be as good as if originally fixed in zenker. store reagents in dark bottles or they will weaken. | N. Copper acetate, picric acid, formaldehyde, acetic acid. decalcifies small deposits, good for GI biopsies, lyses erythrocytes less than Bouin's. toxic |
| <input type="checkbox"/> | 3. What is the difference between the PAM and GMS? | C. Fouchet Reagent: trichloroacetic acid & ferric chloride-oxidizes bilirubin to biliverdin | O. Mercuric chloride, formaldehyde, sodium acetate. hematopoietic, good for lymphoreticular tissue, good with many special stains and antigens |
| <input type="checkbox"/> | 4. Carnoy's: composition, advantages/disadvantages, uses, special considerations | D. Toluidine blue-metachromatic stain, stains mast cell pink, and background blue. | P. Potassium ferrocyanide-hydrochloric acid: this acidic solution binds to ferric ions to form and insoluble blue compound known as Prussian blue |
| <input type="checkbox"/> | 5. Zenker Solution: composition, advantages/disadvantages, uses, special considerations | E. Differentiate between collagen and muscle, and identify an increase in collagenous tissue, as in cirrhosis of the liver. control is internal | Q. Fontana ammoniacal silver solution-impregnate. gold chloride-toner. sodium thiosulfate-reduces unreduced silver. nuclear fast red-counterstain |
| <input type="checkbox"/> | 6. Orth Solution: composition, advantages/disadvantages, uses, special considerations | F. Mercuric chloride, potassium dichromate, sodium sulfate, acetic acid. lyses erythrocytes, good nuclear detail, good for most stains except silver, extremely toxic due to mercury | R. Chloroform, acetic acid, absolute alcohol. lyses erythrocytes, dissolves lipids, rapid, preserves glycogen, good nuclear detail, but causes excessive shrinkage and hardening. good for cytology |
| <input type="checkbox"/> | 7. What are the major reagents used in the Turnbull Blue reaction, and what is the purpose of each? | G. Non-additive/coagulant, overhardens and shrinks tissue, can be used to demonstrate enzymes, esp. good for rabies | S. Non-additive/coagulant, does not fix or destroy carbohydrates, does not fix lipids, causes swelling, precipitates and preserves nucleoproteins (DNA/RNA), caustic, corrosive |
| <input type="checkbox"/> | 8. What are the major reagents in toluidine blue and their purpose? | H. Detect calcium deposits, use a section containing calcium | T. Picric acid, formaldehyde, acetic acid. swelling of acetic acid is balanced by shrinking of picric acid, good for trichrome staining, preserving tissue with soft structures, GI specimens, endocrine tissue. lyses erythrocytes, dissolves calcium and iron |
| <input type="checkbox"/> | 9. What is the Von Kossa stain used for, and what control do you use? | I. PAM uses periodic acid where GMS uses chromic acid because it is weaker and will not over oxidize the carbohydrates in the basal lamina | |
| <input type="checkbox"/> | 10. Acetone: Action, advantages/disadvantages, uses, special considerations | J. Alcian blue-mucin&ground substance. alkaline OH-makes AB insoluble. verhoeff sol.-elastin. Fe chloride-differentiate. sodium thio-remove iodine. crocein scarlet acid-muscle&fibrin. phosphotungstic acid-destain coll.&cyto. safran-retain collagen | |
| <input type="checkbox"/> | 11. Acetic acid: Action, advantages/disadvantages, uses, special considerations | K. Potassium ferricyanide-hydrochloric acid: reacts with ferrous iron. nuclear fast red: counterstain | |
| <input type="checkbox"/> | 12. Bouins: composition, advantages/disadvantages, uses, special considerations | L. Potassium dichromate, formaldehyde, sodium sulfate. demonstrates chromaffin granules, | |
| <input type="checkbox"/> | 13. what are the major reagents in the Fontana Masson stain and their purpose? | | |
| <input type="checkbox"/> | 14. What is the purpose of Masson's trichrome stain, and what control do you use? | | |
| <input type="checkbox"/> | 15. Hollande Solution: composition, advantages/disadvantages, uses, special considerations | | |
| <input type="checkbox"/> | 16. B-5: composition, advantages/disadvantages, uses, special considerations | | |
| <input type="checkbox"/> | 17. What are common problems/errors with Mallory's PTAH? | | |
| <input type="checkbox"/> | 18. What are the major reagents in the Russel/Movat pentachrome stain and their purpose? | | |
| <input type="checkbox"/> | 19. Gill Hematoxylin: progressive/regressive, mordant, ripening, uses/special considerations | | |
| <input type="checkbox"/> | 20. What are common problems/errors with the methyl green pyronin stain? | | |



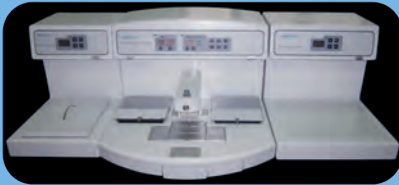
I wanna get quiz-ical. Do you?



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3rd Scientific & Annual General Meeting 2013

QML - The Norman Hotel - Friday 6th December



Acknowledgements:

Thank you to Dr Jason Stone, Dr Michelle Dennis, David Gan & Jason Tu for their valued contribution to another successful & well-attended meeting. This extends out to the lab and staff at SNP & PAH for previous meetings in 2013.

Thank you to the 2013 HGQ committee for an eventful & productive year. Congratulations to elected & re-elected HGQ committee members for the upcoming year.

A tremendous thank you to HGQ members for their continuing contribution & support. We look forward to seeing you all in 2014.

Upcoming Events

- Committee Meeting - **FEB**
- Scientific Meeting - **APR**
- Tissue Paper - **APR**
- www.hgq.org.au- more info & updates

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