Chapter Connection

3rd Issue - July 2008

Chapter Board 2007-2009 - Dr I. Swaminathan, A/Prof Cheah Wei Keat, A/Prof Chia Kok Hoong, Dr Chan Hsiang Sui, Dr Michael Hoe, Dr Dennis Lim, Dr Anton Cheng, A/Prof Pierce Chow, Prof Adrian Leong and A/Prof Jimmy So

***Chapter Connection* is a newsletter specially brought to you by the Chapter of General Surgeons under the purview of the College of Surgeons, Singapore. The Board of the Chapter of General Surgeons is well represented with members from different institutions and this would mean that you could find the latest happenings of the general surgery community of these institutions in this newsletter. This newsletter is published quarterly and will be distributed to the Members of the Chapter of General Surgeons. On the goodwill of the Chapter Board, this quarterly newsletter will also be distributed at no cost to the Trainees and Fellows of General Surgery in various public hospitals.**

Report on Past Chapter Events

*(*More photos of this course can be found at College of Surgeons website at www.css.edu.sg under "Photo Gallery")*

Exit Examination Preparatory Course 2008 for Advanced Surgical Trainees in General Surgery

The Exit Examination Preparatory Course 2008 was conducted from 25-28 June 2008 (Wed-Sat) with the objective to aid all Advanced Surgical Trainees (ASTs) in General Surgery who are sitting for their exit exams in August 2008 to better prepare their exit exams.

Seated in 1st row (left to right)
Dr Mark Wong (AST), Dr Dennis Koh (AST), Dr Kevin Sng (AST)

Seated in 2nd row (left to right)
Dr Wong Jen San (AST), Dr Radhika d/o Lakshmanan (AST), Dr Thant Zin (AST), Dr Reyaz Moiz Singaporewalla (AST)

Seated in 3rd row (left to right)
Dr Lai Jiunn Herng (AST), Dr Alvin Eng (AST), Dr Kenneth Mak (Appointed Examiner), A/Prof Cheah Wei Keat (Course Convener)

ASTs not present in photo
Dr Alfred Kow, Dr Leong Quor Meng, Dr Lim Geok Hoon, Dr Anthony Tang, Dr Tan Choon Chieh, Dr Wong Ting Hway

Informal Networking Dinner – "Surgeons cum Trainees Night"

In conjunction with the Exit Examination Preparatory Course, an informal networking dinner was held on 27 June 2008 (Fri) at Copthorne King's Hotel, where the trainees have had the opportunity to mingle and interact with their lecturers, clinical tutors and examiners of the preparatory course, as well as, other practising general surgeons during the dinner.

Standing back row (left to right)
A/Prof Cheah Wei Keat (Course Convener), Dr Dennis Koh (AST), Dr Wong Jen San (AST), Dr Lai Jiunn Herng (AST), Dr Alvin Eng (AST), Dr Leong Quor Meng (AST)

Standing front row (left to right)
Dr Liau Kui Hin (Appointed Clinical Tutor), A/Prof Pierce Chow (Appointed Clinical Tutor & Examiner), Dr Kenneth Mak (Appointed Examiner), A/Prof Krishnakumar Madhavan (Appointed Clinical Tutor), Dr Alfred Kow (AST), Dr Mark Wong (AST), Dr Anthony Tang (AST)

Seated (left to right)
Dr Ng Boon Keng (Chapter Member), Dr Swaminathan I. (Chapter Chairman), Dr Wong Ting Hway (AST), Dr Chan Heng Thye (President, College of Surgeons Singapore), Prof Fock Kwong Ming (Master, Academy of Medicine Singapore), Dr Lim Geok Hoon (AST)

Modifying the Red Cell Surface: Towards an ABO-Universal Blood Supply

- *by Martin L. Olsson and Henrik Clausen; British Journal of Haematology, Vol. 140, 3-12*

This review by Martin Olsson and Henrik Clausen from University of Lund in Sweden and published in the British Journal of Haematology addresses a long-held pipe dream for many, namely how to modify the antigens on the RBCs of A, B and AB positive blood and create a truly universal blood group. Although it is not the first time that RBCs have been so modified, this paper is different in that the authors describe for the first time a commercially viable method, with evidence from clinical trials, to back up their claim. Called ECO or enzyme-converted to group O blood, this is promising.

The advantages of having a uniform blood supply are obvious - ample blood for all groups, no need to test each time for cross reaction, no need for laborious counter checking by tired hospital staff, etc. Excess donations of less needed blood, which are now discarded, could be converted to ECO and stored. The advantages in situations like war and natural disasters are even more obvious, as blood shortages are very common then.

Previously, Goldstein used alpha galactosidase from coffee beans to B-ECO RBCS, but the process was inefficient, requiring large amounts of enzyme. Based on more recent work, the authors, one of whom is a Laboratory Scientist, have used entirely new families of exoglycosidases from bacteria to cleave the antigen from A, B and AB RBCs. As the bulk of the antigen structure is quite similar, relatively simple cleavage is needed, at just one level, to convert them to ECO. Although the process does not get rid of every little bit of antigen, the amounts so remaining are small enough not to be recognized by any of the conventional blood screening/typing methods, such as traditional typing by test tube and reagent, automated blood grouping platform and even gel column agglutination.

In other words, all the RBCS show up as Group O RBCs.

The authors then provide evidence of trials where such blood was transfused to healthy volunteers, first partially and later fully, and describe the effects. Suffice to say it is well-tolerated, although the number of subjects is still small.

I think this offers real hope for the future, and this is a really good review paper.

NOTES - The Scarless Generation Next Surgery. A Reality or Just Hope

Co-Authored by: Dhir U, Lomanto D, Shabbir A, Cheah WK, So JBY (Department of Surgery, NUH)

Introduction

The age-old adage "Big scars big surgeons" seems to be too archiac for the modern era of surgery. The flexible endoscopy and surgery have undergone evolutionary change over the last half a decade in terms of equipmentation and applicability. The collaboration of both today has led the surgical enthusiasts from all over the world to aim for scarless surgery. This newest initiative of the modern era is Natural Orifice Transluminal Endoscopic Surgery (NOTES). [1]

Evolution of NOTES

The history of NOTES begins with Dimitri Oskarovich Ott, who in 1901 performed the first endoscopic examination of the peritoneal cavity through the vagina, which he termed as "ventroscopy"[1] and thus became the pioneer of natural orifice access. This led to origin of the term Natural Orifice surgery.

Fig 1: NOTES: The Transvaginal approach

Animal Experiments

The first successful natural orifice surgery was trans-vaginal nephrectomy in porcine model performed in 2002 by Gettman et al. The first official report on NOTES, although, was published only in 2004 by Kalloo et al[2] when they performed a series of acute survival studies at Johns Hopkins university which demonstrated the feasibility of performing transgastric liver biopsies. The pilot work of Kallo et al was then followed by studies conducted by other investigators who demonstrated the safety of transgastric ligation of fallopian tubes and cholecystectomy in porcine models.[3,4]

The Johns Hopkins group subsequently described a gastro-jejunostomy technique and more recently, a splenectomy performed via the transgastric approach.[5, 6] Wagh and colleagues recently reported on a transgastric partial hysterectomy. Chuttani et al demonstrated a novel endoscopic full thickness plicator for the treatment of GERD on animal model study. These and other animal studies, all performed in porcine models have been designed to prove the feasibility and short-term safety of this approach.

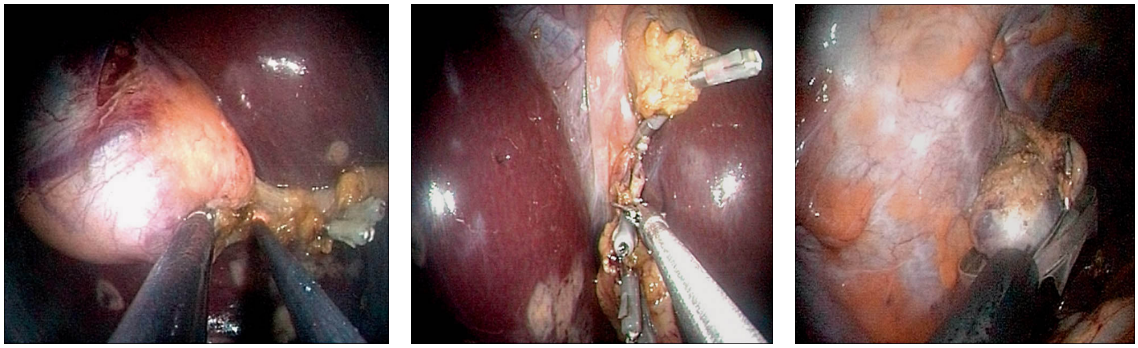

Fig 2: Various steps of NOTES: Transvaginal Cholecystectomy (NUH porcine Experience)

Human Experience

Transgastric drainage of pseudocysts endoscopic and pancreatic debridement is a standard of care in many endoscopic centers worldwide with good short-term results in high-risk patients. More recently transgastric appendectomies have been performed in patients in India, though reported only as personal communication. Endoluminal therapies for reflux disease are becoming commonplace. Recently trans-colonic appendectomies have been attempted in human cadavers. Marc Bessler et al reported a transvaginal laparoscopic assisted endoscopic cholecystectomy in 2007.[7] The increasing trend towards the endoscopic mucosal resection of early gastric cancer and also subsequent management of gastric perforations as shown by Minami S et al. [8] The first purely NOTES transvaginal cholecystectomy was reported by Marescaux J et al from Strasbourg, France in a 30 year old woman with symptomatic cholelithiasis. [9] Today, about 100 cases of NOTES (mostly transvaginal cholecystectomy) have been performed worldwide.

The NUH Experience

We at NUH have been also quite upfront in the NOTES experimentation. The Department of Surgery along with the gastroenterology and NUS has been instrumental in conducting various survival and non-survival porcine model studies. We have performed studies on NOTES approaches. A total of 20 pigs have undergone NOTES procedures such as peritoneoscopy, liver biopsy, oophorectomy tubal ligation, and cholecystectomy via transgastric or transvaginal approaches. The latest addition was the transvaginal ventral hernia repair in a porcine survival model. We at NUH compared the effectiveness of two most common gastrotomy closure techniques i.e. endoloop vs. endoclip.[10] we have also presented on various aspects relating to NOTES at International meetings around the world.[11, 12, 13]

NOTES: Progressing Ahead

For NOTES to mature into a viable technology, both procedure and device developments must continue. An influential treatise from NOSCAR (Natural Orifice Surgery Consortium for Assessment and Research) [14] has been deemed as the "White Paper" delineates the guidelines for the laboratory and clinical natural orifice surgery. In the paper the authors outlined the current shortcomings of the NOTES technique and some of the potential solutions. Recently, NOSCAR launched a comprehensive database in which all patients enrolled in NOTES trails worldwide will be entered. Currently, a team that is skilled in advanced therapeutic endoscopy and laparoscopic skills must perform NOTES. Although, preliminary studies have demonstrated the feasibility of this technique in animal models, further research is warranted to validate its safety in humans.

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☺ ***A Note of Thanks to A/Prof Jimmy So for contributing this article.***
This article can also be read at the Chapter's eForum at www.css.edu.sg/Forum.

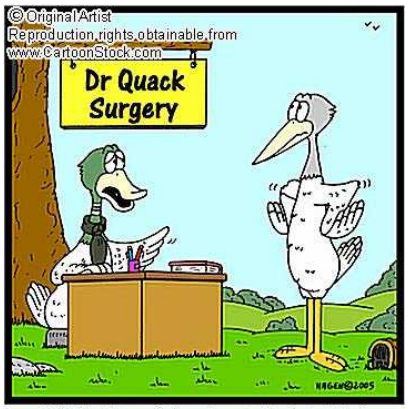
Contribution of any interesting news & articles from Chapter Members are welcome for consideration to publish in this quarterly newsletter. Please send it to the College Secretariat at css@ams.edu.sg.

A Newsletter brought to you by the Chapter of General Surgeons, College of Surgeons, Singapore.

CALENDAR OF EVENTS OF MINIMALLY INVASIVE SURGICAL CENTRE, NUH
(For July to December 2008)

Date	Event
2-5 July 2008	Advanced Laparoscopic Workshop in Digestive Surgery
25-26 July 2008	Basic Laparoscopic Course
25-26 August 2008	International Laparoscopic Workshop on Hernia Surgery
30 August 2008	Interactive Workshop on Diagnostic and Therapeutic Endoscopy
17-18 October 2008	Basic Laparoscopic Course
8 November 2008	Workshop on Medical Video Editing
15-16 November 2008	Workshop on Paediatric Laparoscopic Surgery
28-29 November 2008	Asia-Pacific Workshop on Natural Orifice Transluminal Surgery
No events in December 2008	

All are welcome to register and participate. Please visit www.misc-asia.com for more information.



I finished top of the class at Medical School,
but for some reason, I can't attract a clientele...

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