Chapter Connection

8th Issue - October 2009

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.**

Message from Chapter Chairman

Dear surgical colleagues,

We are proud to announce that with this issue, our newsletter will officially be two years old. No doubt, that is a very short span, but hopefully it is a good beginning. What we need now is to continue the work.

We have been fortunate thus far, in that the College of Surgeons has subsidised the cost of production. However, with the recent financial crisis in the Academy, the 25% subvention to all Colleges has been cut. We have therefore to be self-funding from 2010. I appeal to all Chapter fellows to help find sponsors - industry or otherwise, in order that our newsletter can carry on.

Please feel free to contribute articles, items of general interest and newsworthy articles or abstracts. We would also welcome original articles, so that this newsletter can one day evolve into our own journal.

Warm regards,
Dr Swaminathan I.
Chairman, Chapter of General Surgeons
College of Surgeons, Singapore

Wishing everyone
Happy Holidays on:

17 Oct 2009 – Deepavali
27 Nov 2009 – Hari Raya Haji
25 Dec 2009 – Christmas Day

News/Articles Contribution & Enquiries:

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Contribution of any interesting news & articles from Chapter Members are welcome for consideration to publish in *Chapter Connection*.

We are pleased to inform that A/Prof Cheah Wei Keat, Vice-Chairman of the Chapter of General Surgeons and Head of Department of General Surgery at NUH, has been appointed as the Chairman of Medical Board of the Jurong General Hospital effective May 2009.

Report on Past Chapter Events

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

Exit Examination Preparatory Course 2009 for Advanced Surgical Trainees in General Surgery

The Exit Examination Preparatory Course 2009 was conducted from 30 June-4 July 2009 (Tue-Sat) with the objective to aid all Advanced Surgical Trainees (ASTs) in General Surgery who seated for their exit exams in August 2009 to better prepared their exams. The course convener was A/Prof Pierce Chow.

The ASTs during lectures – *(left to right)*:
Dr Eugene Lim, Dr Kevin Sng, Dr Lim Kok Ren, Dr Chong Chean Leung, Dr Felicia Tan, Dr Chew Min Hoe, Dr Melanie Seah and Dr Ganesh Ramalingam.
(Absent from photo: Dr Thant Zin)

The ASTs with the appointed examiners *(seated left to right)* – A/Prof Pierce Chow, Prof Adrian Leong, Prof Abu Rauff, Prof Raj Nambiar and Prof Low Cheng Hock, together with the Vice-Chairman of the Chapter *(standing 1st from right)* – A/Prof Cheah Wei Keat

Informal Networking Dinner – "Surgeons cum Trainees Night"

In conjunction with the Exit Examination Preparatory Course, an informal networking dinner was held on 3 July 2009 (Fri) at Min Jiang @Goodwood Park 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, Chapter Members during the dinner. The Chapter was privileged to have the College of Surgeons' President, A/Prof Low Yin Peng, to grace the occasion at the dinner.

At the dinner: *(left to right)* – Dr Swaminathan, Dr Chong Chean Leung, Dr Ganesh Ramalingam, Dr Eugene Lim, Dr Chia Kok Hoong, Dr Ng Boon Keng, Dr Liau Kui Hin and A/Prof Low Yin Peng

At the dinner: *(left to right)* – Dr Tan Hiang Khoon, A/Prof Pierce Chow, Dr Stephen Chang, Prof Low Cheng Hock and A/Prof Cheah Wei Keat

Considerations in Elderly Abdominal Surgery Patients

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INTRODUCTION

The problem of the ageing population is enormous in many developed Asian nations. In Singapore, the population over 65 years of age rose from 6.0% in 1990 to 8.2% in 2007. [1] This figure is expected to be about 25% by 2030.[1] Major surgery in elderly patients poses a constant challenge to surgeons and physicians alike.[2] The incidence of co-morbidities is higher in elderly patients and at the same time functional reserves are reduced.[3, 4] It is thus not surprising that elderly patients were found to be associated with a higher rate of peri-operative problems.[5, 6]

OUTCOMES OF COLORECTAL SURGERY IN ELDERLY PATIENTS

Despite the physiological changes described above, there have been numerous studies, more emerging recently, that elderly patients do have acceptable post-operative surgical outcomes.[7-13] The post-operative mortality rates have improved to very decent levels in recent years. It should be noted however that emergency operations are invariably associated with a poorer outcome and it is in the interest of the doctor to encourage patients to undergo an elective procedure rather than wait for a complication of the disease to occur mandating emergency surgery.[5] Elderly patients also have been found to be associated with a higher number of medical complications.[14] Development of complications is significantly associated with a reduced ability for the elderly patient to return to his/her premorbid functional status which should be the ultimate goal of surgical and peri-operative management.[5]

PRE-OPERATIVE MANAGEMENT

The extent of pre-operative preparation should be individualised for each geriatric surgery patient. It should neither be too minimal so as to miss out important issues nor should it be so extensive that unnecessary investigations are performed and the operation is unnecessarily delayed. Often, when there are time-constraints, interdisciplinary referrals may delay the assessment process or even not be performed at all. As such, it is much better to already have a multidisciplinary team ready to assess patients within a short duration at all times.

Vulnerability Assessment

Pre-operative preparation not only includes assessment for vulnerability and increased risk but also includes surgical and post-operative planning. There is increasing evidence that it is more useful to consider risk factors in a more collective fashion. The use of the American Society of Anaesthesiologists (ASA) score has recently been validated in a number of studies as a useful tool.[5, 10, 15] Another useful tool that has somewhat been used more by geriatricians is the Charlson Weighted Co-morbidity Index.[16] This index gives each comorbidity a different weight and is useful in trying to quantify comorbidities in elderly patients. A recent study found the risk of post-operative morbidity to be nearly 4 times higher if the weighted co-morbidity index score was 5 and above.

The concept of frailty is an emerging clinical paradigm in the description of elderly patients. The interesting aspect of frailty is that only a small proportion of persons with at least two chronic diseases are frail, and some older persons with little or no disease show the classic signs of frailty.[17] As such frailty may well be a useful tool that allows quantification of vulnerability to stressors including surgery thus identifying vulnerable patients that previously could not be easily identified through baseline clinical characteristics.

A prospective study is currently being conducted on elderly patients undergoing colorectal resection by the author. The presence of frailty is determined based on assessment of weight loss, physical exhaustion, physical activity level, grip strength and walking speed as suggested by Fried.[17] Frailty is classified as positive when 3 of the 5 criteria are satisfied. Our preliminary findings indicate a statistically significant higher morbidity rate in frail patients.

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The use of scoring systems and risk models have been found to be useful in the prediction of operative mortality. The Physiological and Operative Severity Score for the enUmeration of Mortality and morbidity (POSSUM) scoring model[18] has been validated and is relatively easy to use in the surgical unit. For colorectal surgery, the CR-POSSUM may give a more accurate estimation of the risk of mortality.[19, 20] It should be noted however, that these models may overestimate risk in elderly patients and thus should be used cautiously.[13, 21]

Medical Considerations

Cardiac
The occurrence of peri-operative coronary events has a definite[5] negative impact on patient outcomes. The incidence of peri-operative myocardial infarction is approximately1% in healthy persons[22] and up to 4% in patients with cardiac disease.[23] However, among elderly patients (> 75 years old) the risk from a cardiac event or death was not more than the younger patients.[23]

Pulmonary
Post-operative pulmonary complications have a devastating effect on the elderly and impacts on their functional recovery. Routine pulmonary function testing is probably not valuable. However, efforts directed at improving risk pre-operatively are important and are not to be left out. Pre-operative cessation of smoking, deep breathing exercises, incentive spirometry and planning of anaesthesia are important interventions.[24] Pre-operative mobilisation also has an important role to play.

Cognitive
The occurrence of post-operative delirium has a profound effect on recovery and functional outcomes. [25] Delirium is associated with an increased risk of falls, wound problems, dislodged tubes and aspiration. Specific interventions to prevent post-operative delirium should be routinely implemented but with extra vigilance for high risk patients. A geriatrician's input is vital in such assessment and intervention.

Medications
A review of the patient's medications should be a routine part of the pre-operative assessment to determine the overall benefit of these drugs to the patient. The patient's use of alcohol, sleeping pills, and pain medications should also be specifically addressed as sudden withdrawal might result in post-operative delirium.

Nutritional
There is no doubt about the impact of poor nutrition on post-operative outcomes. The challenge however is to identify the patients with poor nutrition pre-operatively, especially that with occult malnutrition, and also to devise pre-operative nutrition plans. There are many factors that may predispose patients to malnutrition which may or may not be related to the pathology that has to be operated on. The assessment of nutrition in the elderly is complex and should be better performed by a nutritionist as part of a multidisciplinary team.

Other Considerations

Patient education
The undertaking of major surgery is a major life event for anyone, especially in the elderly patient where there are profound implications of increased dependence and risk of morbidity and mortality. Patient and family education plays an important role in alleviating these fears and has a positive impact on the patients' psyche for the operation.

In our multidisciplinary team, the nurse clinician takes on the role of the educator after the surgeon has discussed aspects of the surgery with the patient and family.

Decision making
Although decision-making for treatment/surgery is never easy, these processes are even more complicated and difficult in the elderly surgical patient. For an elderly patient with chronic illnesses

and disabilities, long term survival may not be the most important priority; loss of independence, quality of life and burden on caregivers may take precedence.

Surgical and anaesthetic planning
Surgical and anaesthetic planning needs to take into consideration all of the above aspects discussed. Treatment goals should be identified clearly and good communication between the members of the team managing the patient is required.

Social assessment and discharge planning
Pre-operative assessment of the elderly patient's social situation is important to anticipate any problems with post-operative care at home. These should be correlated to the patient's preferences and motivation but must be balanced with realism. Identifying the main caregiver in the family and training of the caregiver should be performed. Also there should be planning for placement in step-down facilities for opportunities in rehabilitation.

INTRA-OPERATIVE MANAGEMENT

Surgical Aspects
The aim of intra-operative care should focus on minimising surgical trauma. The nature of the operation should have been planned prior to surgery with contingency plans. The benefits of an open approach compared to a laparoscopic approach should be a point of discussion of the multidisciplinary team.

Anaesthesia Aspects
The presence of mild hypothermia has been shown to more than double the incidence of post-operative myocardial events.[26] Hypothermia has been also associated with increased peri-operative blood loss. There are also adverse effects on immune function and oxygen delivery to the peripheral tissues.

Both under-hydration or over-hydration have negative effects on haemodynamic stability. The optimal choice of monitoring hydration status is still debatable and more accurate measures need to be balanced with the invasiveness of the probe.

POST-OPERATIVE MANAGEMENT

Pain Control
Post-operative pain is often inadequately treated in the elderly because of the concern of using potent analgesics in older patients and the misconception that pain sensations are diminished in older people.

Post-operative Delirium
Delirium affects up to 61% of elderly patients who undergo surgery.[27] The single biggest risk factor for delirium is dementia but age, dehydration, electrolyte abnormalities, immobilisation and polypharmacy can also increase the risk. It is often unrecognised or misdiagnosed as the signs can be subtle. Prompt identification is important as delirium is a marker for delayed functional recovery and has significant implications on morbidity and mortality.

Urinary Catheters and Other Tubes
Indwelling urinary catheters should be removed as soon as possible in the post-operative period. If there is a concern about urinary retention, intermittent catheterisation should be considered. The use of a urinary catheter beyond 48 hours should be avoided except when retention cannot be managed by other means.[28] Other tubes should be kept to the minimal so as to reduce discomfort and facilitate mobilisation.

Early Mobilisation
Prolonged bed rest can adversely affect the elderly patient. Changes noted with prolonged immobility include a decrease in cardiac output, baroreceptor desensitisation and orthostatic hypotension, skeletal muscle deconditioning, bone loss, joint contractures, hypercalcaemia,

constipation, incontinence, pressure sores, increased risk of DVT and pneumonia.[28] Early mobilisation will help to reduce the risk of these complications.

Management of Patients' Expectations

Patient education should continue into the post-operative period. This education will serve to manage the patients' expectations on the recovery process. The nurse clinician has an active role in encouraging patients to be more empowered in their own recovery process.

CONCLUSION

Optimal management of the elderly surgical patient is complex and involves planning and attention to detail over the peri-operative period. A multidisciplinary approach is likely to become indispensible in the management of these difficult patients.

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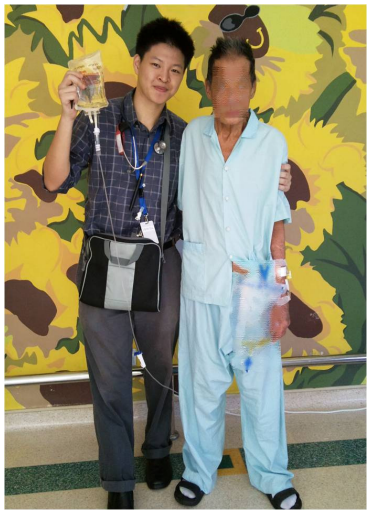

Figure 1
81 year old with severe COPD being ambulated on POD 1 after a left hemicolectomy. He was fit for discharge on POD 5

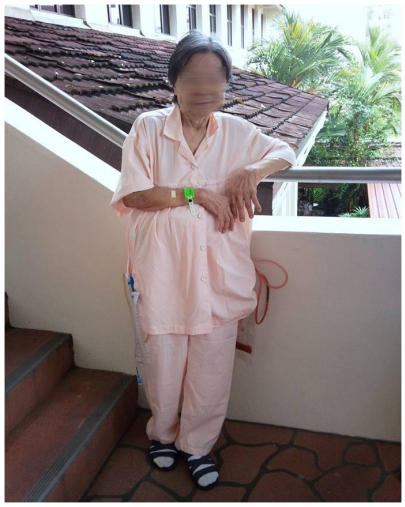

Figure 2
90 year old ambulating independently on POD 2 after an ultralow anterior resection. She was fit for discharge on POD 6

☺ ***A Note of Thanks to Dr Tan Kok Yang for contributing this article.***

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.

Announcement

The *Chapter Connection* has turned 2 years old with the publication of this 8th issue! The Chapter hopes to continue this Chapter newsletter and to improve it progressively. The Chapter welcomes any feedback and/or suggestions for improvements to the newsletter so that it could grow to be larger and better.

The Chapter is planning to work with its healthcare partners to seek funding support for the newsletter. All members are encouraged to step forth and participate in the Chapter's very own newsletter – *Chapter Connection* – and help to build it to be a unified communication tool in the general surgery community. If you have news/announcements to share within the general surgery community, make the *Chapter Connection* as your notice board!

Trainees and Fellows who are non-Chapter members are welcome to contribute too!

A heartfelt thanks from the Chapter to all members for your continued support.

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News Bulletin

Looking for a space to advertise your services and events to all surgeons and trainees in the General Surgery community? Look no further!! The Chapter Connection is the ideal medium to reach out to all general surgeons to inform them about your latest events or for example, any new technologies that you are currently adopting and still not widely known by surgeons in the community. Advertise with us now!

Advertising Rates (for A4 Full Colour Digital Print only)

Inner front page	S$600.00
Inner back page	S$600.00
Outer back page	S$800.00

1. Advertisement to be in A4 size only.

2. Advertiser is to submit the advertisement in A4 size either in MS Words or MS Powerpoint format.

3. Advertisement order must submit at least one month before the print date and advertisement artwork must submit at least two weeks before the print date. The print date is two weeks before the month of issue.
   E.g. for the October 2009 issue:
   - print date is 3rd week of September 2009
   - Order to come in by 3rd week of August 2009
   - Artwork to come in by 1st week of September 2009

4. Advertisement is strictly of academic / scientific / professional nature only.

5. Payment should be made to "*College of Surgeons, Singapore*" and indicate "Chapter of General Surgeons – newsletter advertising" at the back of the cheque. Cheque to be mailed to College Secretariat, College of Surgeons Singapore, 81 Kim Keat Road, #11-00 NKF Centre, Singapore 328836. Payment need to be received before advertisement space will be reserved. Space reservation is on a first-come-first-serve basis.

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