

**D.S. ROSENGARTEN
SURGICAL TRAINEE RESEARCH PRIZE 2015**

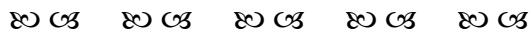
SATURDAY 5TH DECEMBER, 2015

PRESENTED BY MRS CANDICE ROSENGARTEN

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JOHNSON & JOHNSON MEDICAL, AUSTRALIA

ABSTRACT BOOKLET



THE D.S. ROSENGARTEN SURGICAL TRAINEE RESEARCH PRIZE



Mr Sam Rosengarten

The D.S. Rosengarten Surgical Trainee Research is named in honour of David Rosengarten. David learnt his surgery at the Alfred Hospital before undertaking research and Post-Fellowship training in Vascular Surgery at the Royal Postgraduate Medical School, Hammersmith. He returned to the Alfred and held appointments in the Department of Surgery and the Vascular Unit. David was appointed Head of the Vascular Surgery Unit at the Alfred in 1987, the position he held until his sudden death in 1994. David was recognised for his encouragement of research, for an enduring interest in surgical audit and his involvement in registrar training. This prize is his enduring memorial.



TheAlfred

D. S. ROSENGARTEN SURGICAL TRAINEE RESEARCH PRIZE 2015

A SYMPOSIUM WILL BE HELD TO DETERMINE THIS PRIZE
ON SATURDAY 5TH DECEMBER 2015 IN THE
AMREP SEMINAR ROOM
Ground Floor,
Alfred Hospital
Commercial Road, MELBOURNE VIC 3004

You are cordially invited to attend and support this most important event

8.00 am	Breakfast	
8.25 am	Introduction by Chairman	<i>Mr Stewart Skinner</i>
8.30 am	<u>Contemporary incidence and associations of painful neuroma in a mixed traumatic and non-traumatic cohort of lower-limb amputees</u>	Anthony Penna
8:45 am	<u>Surgical outcomes for duodenal adenoma and adenocarcinoma: A multicentre study on Australia and the United Kingdom</u>	Angus Lee
9.00 am	<u>Adjuvant chemotherapy for pancreatic adenocarcinoma at The Alfred Hospital</u>	Rachel Gordon
9.15 am	<u>Pre-operative predictors of parathyroid microadenomas</u>	Katherine Suter
9.30 am	<u>Comparing the incidence of complicated peptic ulcer disease across two health networks in Australia.</u>	Arpit Talwar
9.45 am	<u>Utilisation of blood transfusion in emergency general surgery – Are they all appropriate?</u>	Vignesh Narasimhan
10.00 am	<u>The role of hyperbilirubinaemia in the diagnosis of acute appendicitis</u>	Daniel Foley
	MORNING TEA	
10.15 am	Including Registar and group photographs Adjudicators meeting will take place at this time	
10.45 am	Presentation of Prize	<i>Mrs C. Rosengarten</i>

Title: Contemporary incidence and associations of painful neuroma in a mixed traumatic and non-traumatic cohort of lower-limb amputees

Authors: Penna A(1), Konstantatos A, (2), Cranwell WC(3), Boyd D(2), Paul E (4) Bruscinio-Raiola F(1)

1. Alfred hospital – Department of Plastic and Reconstructive surgery
2. Alfred hospital – Department of Anaesthesia and Perioperative medicine
3. Monash university – Central Clinical School
4. Monash University – School of Public Health

Introduction:

The painful post amputation neuroma significantly impairs the prosthesis-wearing lower-limb amputee. It remains a poorly understood condition with novel surgical therapies providing questionable benefit. The literature is limited to studies in cohorts who have sustained traumatic injuries, mainly in combat situations. The incidence in these studies range from 10-38%. This paper reports the incidence of painful neuroma in a modern tertiary centre with a contemporary case load of amputations performed for both traumatic and non-traumatic indications.

Method:

This retrospective study analysed the records of 304 patients who underwent lower-limb amputation at The Alfred Hospital, Melbourne between 1 January 2002 and 1 March 2012. Patients were included in our analysis if they completed one year follow-up at the Caulfield Hospital Amputee Rehabilitation Clinic, producing a final cohort of 96 patients. The records of these 96 patients were reviewed to identify painful neuroma post-operatively, two criteria to be met. Firstly, the records needed to indicate clinical suspicion on history and examination, and secondly, there must be corresponding histopathological or radiological evidence. Fisher exact test calculator was used to compare the groups.

Results:

The overall incidence of symptomatic neuromas was 4.16%. There was no significant difference in the indication for patients who underwent amputation for a traumatic indication (6.25%, n=32) compared to non-traumatic indications (3.13%, n=64) (p=0.59). The postoperative pain scores were on average higher in 3 of the 4 neuroma patients, when compared to patients who did not develop symptomatic neuromas.

Conclusion:

This study found the incidence of painful neuroma post-amputation is markedly lower compared to previous studies, with no significant difference in incidence between amputations for traumatic and non-traumatic indications. These findings will require prospective validation but may reflect the impact of post-operative pain and specialist rehabilitation services in the cohort studied.

Surgical outcomes for duodenal adenoma and adenocarcinoma: A multicentre study in Australia and the United Kingdom

Duodenal adenomas and adenocarcinomas are uncommon gastrointestinal neoplasms. Although surgery can be curative, it carries significant morbidity.

This study aims to evaluate the rate of pancreatic leaks, long-term outcomes and prognostic factors for patients with duodenal adenomas and adenocarcinomas who underwent curative resection.

This retrospective study (2004- 2014) was conducted in 4 major metropolitan hospitals in Victoria, Australia (Alfred, Cabrini and Western Hospitals) and Swansea, UK (Morrison Hospital). Ampullary tumours were excluded. Patient demographics, type of operation, details of surgical pathology specimens, pancreatic leak rate (ISGPF grading system), recurrence and survival were recorded. Using the Kaplan Meier method, the 5 year overall survival was estimated. Prognostic factors were analysed using Cox regression.

A total of 47 patients were included. 49 curative resections were performed (2 for recurrence) including 33 pancreaticoduodenectomies (Whipple/PPPD), 5 pancreas-preserving total duodenectomies, 10 segmental duodenal resections, and 1 transduodenal resection. Final histopathology revealed 18 duodenal adenomas and 31 adenocarcinomas. Pancreatic leak rate was 31.6 % (50% were grade C). 31% of patients with duodenal adenocarcinoma had recurrence (1 local, 3 regional & 5 distant). 5 year overall survival for patients with duodenal adenocarcinoma was 65% which was affected by Grade C pancreatic leak (hazard ratio 4.6; $p = 0.023$) and advanced tumour stage (stage 3: hazard ratio 9.6; $p = 0.035$). Average length of follow up was 21 months.

High pancreatic leak rate contributes to significant morbidity and reduced survival in patients who have undergone curative resection for duodenal adenocarcinoma.

Dr. Angus Lee

Adjuvant chemotherapy for pancreatic adenocarcinoma at The Alfred Hospital

Authors: L Freeman MBBS (Hons), R Gordon MD, BBSci, C Pilgrim MBBS, FRACS, PhD

Introduction: Almost 3000 people in Australia are diagnosed each year with pancreatic ductal adenocarcinoma (PDAC) and surgery is regarded as the only potentially curative treatment. Due to early systemic and local spread of this disease only a minority are resectable at diagnosis. It is well established that long-term survival is improved with adjuvant chemotherapy, however current evidence suggests more than 30% of eligible patients do not receive it. The exact reasons for this discrepancy are unclear. The purpose of this study therefore was to determine the number of patients with PDAC who underwent resection who were not treated with adjuvant chemotherapy and the reasons behind this.

Method: The Alfred Hospital's Upper gastrointestinal hepatopancreaticobiliary service database was accessed for the period July 2005 to June 2015. Subsequent chart review of PDAC patients treated surgically regarding their treatment or otherwise with adjuvant chemotherapy was then performed. Statistical analysis was done using KMWin for Windows. All information was recorded in a deidentified manner.

Results: In this 10-year time period, 159 pancreatic resections were undertaken at The Alfred Hospital. The most common indication was PDAC (N=53). Of these, 42 were recommended for adjuvant chemotherapy but only 32 (60% of total PDAC patients) actually received treatment. The reasons were multifactorial and included development of post-operative major complications following pancreatectomy, rapid progression of disease and patient preference. For all pancreatic surgeries, there was a 25.2% major complication rate (N=40), a 38.9% minor complication rate (N=62) and 2 in hospital deaths in this period. Overall survival was not statistically affected by major post-operative complications but adjuvant therapy did provide a slight survival advantage, but no more than a few months.

Discussion: A major reason for non-treatment with adjuvant therapy following resection for pancreatic cancer was the development of postoperative complications. Our rate of major and minor complications and in-hospital mortality rate is in keeping with international standards [REF], and represents an inherent major limitation in delivering systemic treatment to this patient group. Since the ESPAC-3 trial, there has been an overall increase in adjuvant therapy utilization, but despite this, still less than two thirds of patients receive treatment. The increased efficacy of modern chemotherapy regimens is rendered useless if patients do not actually receive the treatment. A regimen shift towards neoadjuvant therapy and treating patients systemically prior to surgery could overcome this shortfall. Our study highlights other reasons including patient refusal and rapid disease progression in a small group of patients despite best attempts at preoperative staging and meticulous surgery. This again highlights the need for systemic therapy as the primary approach to this aggressive disease, with surgery reserved for local control at the conclusion of systemic treatment.

Conclusion: Despite our appreciation that PDAC is generally a systemic disease at diagnosis, less than two thirds of patients treated 'curatively' receive systemic therapy. There are many reasons why adjuvant therapy may not be instituted and an obvious solution is to consider the neoadjuvant approach. Research into the neoadjuvant approach to pancreas cancer warrants further investigation.

Department of Upper Gastrointestinal Surgery, The Alfred Hospital, Melbourne

Pre-operative Predictors of Parathyroid Microadenomas

D. S. ROSENGARTEN

SURGICAL TRAINEE RESEARCH PRIZE 2015

December, 2015

Katherine J. L. Suter¹, James C. Lee^{1, 2}, Meei J. Yeung^{1, 2}, William R. Johnson^{1, 2}, Jonathan W. Serpell^{1, 2}, Simon Grodski^{1, 2}

1. Monash University Endocrine Surgery Unit, Alfred Hospital, Melbourne, Australia

2. Department of Surgery, Monash University, Melbourne, Australia

PURPOSE

In recent years, patients with primary hyperparathyroidism (PHPT) are being diagnosed earlier, with milder elevations in parathyroid hormone (PTH) and serum calcium (Ca^{2+}). We aimed to investigate whether adenoma size reflects biochemical severity of presentation and influences accuracy of pre-operative localisation scans.

METHODOLOGY

A total of 797 consecutive patients undergoing parathyroidectomy for PHPT were recruited into either the microadenoma (≤ 200 mg) or macroadenoma (> 200 mg) group. Preoperative serum Ca^{2+} , PTH, rates of minimally invasive parathyroidectomy (MIP) and bilateral neck exploration (BNE), accuracy of preoperative ultrasound (US) and sestamibi (MIBI) scans, cure rates, and other demographic parameters were compared. The data were analysed using Student's t-test, Chi squared test, linear and multiple regression analyses.

RESULTS

Patients in the microadenoma group had significantly lower preoperative serum Ca^{2+} ($p < 0.01$) and PTH ($p < 0.01$), less accurate MIBI ($p < 0.01$) and US ($p < 0.01$), lower cure rates ($p = 0.04$), and were more likely to undergo BNE ($p < 0.01$). However, multivariate analysis revealed that microadenomas are most strongly associated with the findings of less accurate MIBI ($p = 0.03$) and lower preoperative Ca^{2+} ($p = 0.04$).

CONCLUSION

In conclusion, smaller adenomas are strongly associated with biochemically milder PHPT and less accurate localisation studies. Therefore, microadenomas continue to present as a challenge in both diagnosis and management.

Comparing the incidence of complicated peptic ulcer disease across two health networks in Australia.

Dr Arpit Talwar, Dr Nathan Kirzner, Dr Lara Freeman, A/Prof Peter Nottle, Mr Charles Pilgrim.

Abstract

Background and Aims

Although *Helicobacter pylori* eradication has decreased recurrence rates of peptic ulcer disease (PUD), complications continue to occur. This study aims to investigate the incidence of complicated PUD across two health networks in Australia.

Methods

A retrospective, dual-centred cohort study of all patients with benign PUD from the calendar year of 2013 were identified using medical records from two hospital networks using pertinent ICD-10 codes (K25-27). Ulcers with a malignant neoplasia diagnosis were excluded. Results were compared with data from the Australian Institute of Health and Welfare.

Results

A total of 259 patients diagnosed with benign PUD were identified. Australian statistics from July 2012-June 2013 demonstrated incidence of haemorrhage as 40.61% and perforation as 9.07%. This was comparable across both health networks with incidence of haemorrhage being 36.62% and 30.93% respectively, whilst that of perforation 11.27% and 9.17% respectively. Presence of *H. pylori* in Hospital A ($p = 0.003$) and Hospital B ($p = 0.06$) was statistically significant to 10% for patients with complicated PUD. No other difference in risk factors was found between groups.

Conclusion

The incidence of complicated PUD remains comparable to Australian data across the two health networks. Presence of *H. pylori* increases the incidence of complicated PUD.

Utilisation of blood transfusion in emergency general surgery- Are they all appropriate?

*Vignesh Narasimhan**, *Charles Pilgrim*

Frankston Hospital, Peninsula Health

Background

Decisions regarding perioperative blood transfusions are subject to a variety of clinical and laboratory factors. Blood transfusions are associated with increased risks of infection and sepsis. Current guidelines on transfusions are based on elective settings. However, there is paucity of data on blood transfusions in emergency surgery.

Aims

To review the appropriateness of blood transfusions in patients undergoing emergency general surgical laparotomies.

Methods

A retrospective review of patients undergoing emergency general surgical laparotomies at Peninsula Health from January 2013 to May 2015 was conducted. Haemoglobin (Hb) levels triggering transfusion and overall blood utilisation were obtained. Transfusions were classified based on whether they were given pre, intra or post-operatively. Transfusions with Hb >80 were deemed inappropriate as per Australian blood authority guidelines.

Results

Over the 18 month period, 368 patients underwent 398 laparotomies. Blood transfusions were given to 102 (27.7%) patients. These patients required a total of 240 transfusion episodes. Patients were given a median of three units of blood. One hundred and sixty-six (69%) transfusions were post-operative. Forty-six (19.2%) transfusions were given with Hb >80 and were deemed inappropriate.

Conclusion

Nearly one in five patients received an inappropriate transfusion. More judicious use of blood products in emergency patients is required.

Title

The role of hyperbilirubinaemia in the diagnosis of acute appendicitis

Foley D¹, Spychal B¹, Rizzitelli A¹

Purpose

To evaluate the role of hyperbilirubinaemia (HBR) in expediting the diagnosis of acute appendicitis.

Methodology

A retrospective review was performed on patients who underwent appendicectomy and had a pre-operative bilirubin measurement between February 2012 and May 2014 at Frankston Hospital, Victoria. Patients without histopathology or bilirubin levels were excluded. Bilirubin, white cell count (WCC), C reactive protein (CRP), Alvarado score and histopathology were collected.

Results

A total of 931 patients were identified of which 618 met inclusion criteria.

Hyperbilirubinaemia had a significant association with appendicitis with an odds ratio of 2.5 (1.3-4.6 95%CI, p=0.004). White cell count, CRP and Alvarado score also had significant associations with appendicitis with odds ratios of 6.4 (4.3-9.5 95%CI, p<0.001), 2 (1.3-3 95%CI, p=0.001) and 5.9 (3.9-8.8 95%CI, p<0.001). When receiver operating characteristic graphs were modeled the addition of bilirubin to WCC, CRP and Alvarado score gave only an increase in the area under the curve from 0.76 to 0.78

Conclusion

HBR showed a significant correlation with acute appendicitis. CRP and HBR showed their greatest utility in patients with an equivocal Alvarado.