

## SELECTED ABSTRACTS

### Isolated caudate lobe resection: Technical challenges

Pillai SA, Sathyanesan J, Perumal S, Perumal SU, Lakshmanan A. et al *Annals of Gastroenterology* 2013; **26**(2): 1-6

#### Background

Isolated caudate lobe resection remains a technical challenge even in the best hands. This is due to the difficult approach and its location between major vessels. This retrospective study aims to analyse our experience with isolated caudate lobe resections.

#### Methods

Of the 402 patients who underwent liver resections between January 2002 and December 2011, we identified 13 caudate lobectomies. We analysed the operative parameters, hospital stay, morbidity and follow up of these patients.

#### Results

There were nine males and four females, age ranging between 30 and 72 years. The indications were hepatocellular carcinoma in nine patients, hilar cholangiocarcinoma in two, solitary fibrous tumour in one, and a regenerative nodule in one patient. Left-sided approach was employed in seven cases, right-sided approach in three cases and a combined approach in three cases. Operating time ranged between 125 and 225 min and blood loss ranged between 210 and 630 ml. There was no mortality in the post-operative period. No local recurrence was noted in the follow-up period ranging from six months to seven years.

#### Conclusion

Caudate lobe resections, although technically challenging, can be successfully performed with minimal blood loss. Surgery offers potential cure in isolated caudate lobe tumours. The location and size of the tumour decides the approach.

**Commentary:** Chandika Liyanage MPhil,MS,MRCS. Hepatobiliary Surgeon

*Hepatic lesions involving the caudate lobe will result in a greater loss of liver volume if an isolated caudate lobe resection is not undertaken. Isolated caudate lobe resection maximally preserves functioning liver parenchyma, reducing the chance of post-operative complications related to major liver resections, particularly in cirrhotic patients. This study demonstrates that although isolated caudate lobe resection is technically demanding it will be beneficial for the patients with HCC who will have no other option but transplant, as other modalities of therapy*

*like TACE, RFA and percutaneous ethanol injection may not be possible for these tumours considering the inaccessibility of the location. I believe the patients will benefit from such a technically detailed procedure at a center of excellence instead of nihilism.*

### Meta-analysis of popliteal-to-distal vein bypass grafts for critical ischemia

Albers M, Romiti M, Brochado-Neto FC, De Luccia N, Pereira CA. *Journal of Vascular Surgery* 2006; **43**(3): 498-503.

#### Background

Several studies have described the use of popliteal-to-distal bypass grafts, mostly in patients with diabetes mellitus who show tissue loss and represent a high-risk population. The study objective was to conduct meta-analysis to assess the long-term primary and secondary patency and foot preservation after popliteal-to-distal bypass grafts.

#### Methods

Data was retrieved from studies published from 1981 through 2004 that were identified from an electronic database. Thirty one series that used survival analysis reported a one year graft patency rate and included at least 15 bypasses. Data from life tables, survival curves, and texts were used to calculate an interval success rate for each month in each series of grafts. Monthly success rates were combined across series to obtain a pooled estimate of success for each month, according to a random-effects protocol for meta-analysis. Pooled survival curves were then constructed for graft patency and foot preservation.

#### Results

The five year pooled estimate  $\pm$  standard error was 63.1%  $\pm$  4.3% for primary patency, 70.7%  $\pm$  4.6% for secondary patency, and 77.7%  $\pm$  4.3% for foot preservation. There was a superiority trend favoring reversed vein grafts and tibial bypasses that became more apparent in sensitivity analysis. No publication bias was detected.

#### Conclusion

The popliteal-to-distal vein bypass is a tool of high efficiency in the treatment of severe, chronic critical ischemia in the lower extremity.

**Commentary:** M.R.N. Cassim MBBS, MS, MRCS. Consultant Vascular & Transplant Surgeon and Senior Lecturer in Surgery, University of Colombo

*In Sri Lanka, the incidence of diabetes mellitus is increasing and the population is aging. These factors together contribute towards an increasing incidence of distal (tib-*

ial) occlusive arterial disease. As this meta-analysis confirms good outcomes for popliteal distal bypass (primary patency for 5-years 63.1%), it is a good treatment option for patients with tibial disease. In Sri Lanka access to endovascular treatment is limited due to lack of catheterization laboratory facilities and the high cost of devices. Despite a trend towards endovascular treatment in the western world, in our country's context the standard popliteal distal bypass would be a more practical option. The distal bypass involves harvesting a short segment of saphenous vein and can be carried out rapidly. One of the drawbacks with this procedure is that it cannot be offered to high risk patients.

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### **Cardiopulmonary exercise testing as a predictor of complications in oesophagogastric cancer surgery**

Moyes LH, McCaffer CJ, Carter RC, Fullarton GM, Mackay CK. et al. *Annals of the Royal College of Surgeons of England*. 2013; 95: 125-130

#### **Introduction**

An anaerobic threshold (AT) of <11ml/min/kg can identify patients at high risk of cardiopulmonary complications after major surgery. The aim of this study was to assess the value of cardiopulmonary exercise testing (CPET) in predicting cardiopulmonary complications in high risk patients undergoing oesophagogastric cancer resection.

#### **Methods**

Between March 2008 and October 2010, 108 patients (83 men, 25 women) with a median age of 66 years (range: 38-84 years) underwent CPET before potentially curative resections for oesophagogastric cancers. Measured CPET variables included AT and maximum oxygen uptake at peak exercise (VO<sub>2</sub> peak). Outcome measures were length of high dependency unit stay, length of hospital stay, unplanned intensive care unit (ICU) admission, and post-operative morbidity and mortality.

#### **Results**

The mean AT and VO<sub>2</sub> peak were 10.8ml/min/kg (standard deviation [SD]: 2.8ml/min/kg, range: 4.6-19.3ml/min/kg) and 15.2ml/min/kg (SD: 5.3ml/min/kg, range: 5.4-33.3ml/min/kg) respectively; 57 patients (55%) had an AT of <11ml/min/kg and 26 (12%) had an AT of <9ml/min/kg. Postoperative complications occurred in 57 patients (29 cardiopulmonary [28%] and 28 non-cardiopulmonary [27%]). Four patients (4%) died in hospital and 21 (20%) required an unplanned ICU admission. Cardiopulmonary

complications occurred in 42% of patients with an AT of <9ml/min/kg compared with 29% of patients with an AT of 9-11ml/min/kg but <11ml/min/kg and 20% of patients with an AT of ≥11ml/min/kg (p = 0.04). There was a trend that those with an AT of <11ml/min/kg and a low VO<sub>2</sub> peak had a higher rate of unplanned ICU admission.

#### **Conclusions**

This study has shown a correlation between AT and the development of cardiopulmonary complications although the discriminatory ability was low.

**Commentary:** Rasika Kotakedeniya, MBBS MS MRCS(Eng), Consultant Surgeon and Senior Lecturer in Surgery, Faculty of Medicine, University of Peradeniya

*Surgical resection still remains the only hope for cure in gastric and oesophageal cancer. Cardiopulmonary complications are the major cause of morbidity and mortality after these procedures.*

*As the stress of major surgery causes increase an oxygen demand by as much as 40%, the patient needs to have sufficient cardiopulmonary reserve. In our set up we use echocardiography and spirometry for pre-operative assessment of fitness for surgery. These assessments will not provide objective assessment of the cardiopulmonary status of the patient.*

*Cardiopulmonary Exercise Testing (CEPT) is an alternative, noninvasive and more objective way of assessment of cardiopulmonary status of patients undergoing major surgery. CEPT measures oxygen uptake at different levels of physical work. This study intend to predict poor outcome in oesophagogastric surgery due to cardiopulmonary complications using parameters of CEPT.*

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### **Long term functional outcomes after treatment for localised prostate cancer**

Resnick MJ, Koyama T, Fan KH, Albertsen PC, Goodman M. et al. *The New England Journal of Medicine* 2013; 368: 436-45.  
DOI: 10.1056/NEJMoa1209978

#### **Background**

The purpose of this analysis was to compare long-term urinary, bowel, and sexual function after radical prostatectomy or external-beam radiation therapy.

#### **Methods**

The Prostate Cancer Outcomes Study (PCOS) enrolled 3533 men in whom prostate cancer had been diagnosed in 1994 or 1995. The current cohort comprised 1655 men in whom

localized prostate cancer had been diagnosed between the ages of 55 and 74 years and who had undergone either surgery (1164 men) or radiotherapy (491 men). Functional status was assessed at baseline and at two, five and 15 years after diagnosis. We used multivariable propensity scoring to compare functional outcomes according to treatment.

## Results

Patients undergoing prostatectomy were more likely to have urinary incontinence than were those undergoing radiotherapy at two years (odds ratio, 6.22; 95% confidence interval [CI], 1.92 to 20.29) and 5 years (odds ratio, 5.10; 95% CI, 2.29 to 11.36). However, no significant between-group difference in the odds of urinary incontinence was noted at 15 years. Similarly, although patients undergoing prostatectomy were more likely to have erectile dysfunction at two years (odds ratio, 3.46; 95% CI, 1.93 to 6.17) and five years (odds ratio, 1.96; 95% CI, 1.05 to 3.63), no significant between-group difference was noted at 15 years. Patients undergoing prostatectomy were less likely to have bowel urgency at 2 years (odds ratio, 0.39; 95% CI, 0.22 to 0.68) and five years (odds ratio, 0.47; 95% CI, 0.26 to 0.84), again with no significant between-group difference in the odds of bowel urgency at 15 years.

## Conclusions

At 15 years, no significant relative differences in disease-specific functional outcomes were observed among men undergoing prostatectomy or radiotherapy. Nonetheless, men treated for localised prostate cancer commonly had declines in all functional domains during 15 years of follow-up.

**Commentary:** Ajith Malalasekera MBBS, MS, MRCS.  
Urological Surgeon

*Comparison of the long term functional outcomes following radical treatment with surgery or radiotherapy for localized prostate cancer shows no significant difference in urinary, bowel, and sexual function at 15 years. However in the short to intermediate follow up (ie at 2 and 5 years) there is significantly increased urinary incontinence and erectile dysfunction in the prostatectomy arm. This may be important in the 'younger' and otherwise healthy patient, in a disease where many do not actually benefit from definitive treatment. The absence of an age matched, untreated control arm, as identified by the authors, does limit the ability to detect how significantly the decline in the functional domains is attributed to the prostate cancer treatment versus age related changes.*