

Session 4

Accelerated partial breast irradiation: role of the surgeon

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Objective: To review accelerated partial breast irradiation (APBI) post-lumpectomy for early stage breast cancer and to underscore the key role of the surgeons in utilization of the technique. Accelerated partial breast irradiation permits irradiation of residual cancer cells post-breast conserving surgery to be given over one week *versus* the conventional five to six weeks. This increases the likelihood of treatment for patients with poor access to treatment facilities and convenience of completion of radiotherapy one week post definitive surgery. Since the main effect of post-lumpectomy radiotherapy in early breast cancer is to reduce the risk of recurrence in the tumour bed region, whole breast irradiation may not be necessary. As the volume of normal tissue to receive radiotherapy decreases, a larger dose per treatment is tolerated.

Methods: A review of the updated APBI results from a large surgical database and single institutions was done: 1449 cases from the American Society of Breast Surgeons MammoSite Registry Trial and 678 cases from the William Beaumont Hospital. A number of techniques were used to deliver these fewer large fraction sizes over a shorter overall treatment time. Three common forms of APBI are interstitial implants, 3-dimensional conformal radiation therapy and balloon-based brachytherapy.

Results: Analysis revealed that the five-year actuarial ipsilateral breast tumour recurrence, regional nodal failure and distant metastasis were 2.8%, 0.6% and 1.6%, respectively. In the most commonly performed technique, balloon-based brachytherapy, the surgeon is required to select the most appropriate patient and to properly insert radiation delivery devices into the lumpectomy cavity. These two steps are critical to the efficacy and toxicity of the treatment. The geometry of the inserted device dictates the eventual dose distribution and the feasibility of treatment itself. We will review the surgeon's role in this radiotherapy technique.

Conclusion: Accelerated partial breast irradiation appears safe and effective but requires a high degree of involvement of surgeons in the radiotherapy process.

Umbilical hernia repair in Jamaican children

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Objective: To document the incidence of elective and emergency umbilical hernia repair in Jamaican children presenting to the Bustamante Hospital for Children.

Methods: A retrospective analysis, the largest of its kind found in the English literature, was done using the operating theatre and medical records extending over a two-year period from January 2011 to December 2012. A total of 776 patients fulfilled the inclusion criteria.

Results: The ages of the patients ranged from seven months to 12 years of age. Of the 776 patients identified for inclusion, the gender of 715 was determined from the available records. There were 350 males (49%) and 365 (51%) females. The number of emergency cases totalled six over the two-year period (0.77%).

Conclusions: Paediatric patients with umbilical hernia presented to the Bustamante Hospital for Children with a male to female ratio of 1:1. Umbilical herniorrhaphy is most commonly performed electively and less than one per cent of cases presented emergently.

Training surgical residents: are we adequately preparing them for the business of surgery?

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Summary: In an era of increasing costs and competition, coupled with decreased reimbursements, the graduating surgical resident is faced with many challenges outside the operating room. Surgical training has significantly transformed over the past 20 years with numerous technological advances and new theories on training methods. This discursive paper explores whether we are doing enough to prepare surgical residents for life outside the teaching hospital.

Training surgeons in the modern laparoscopic era

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Aim: In the era of medical litigation, surgical training has been forced to evolve. In sub-specialty training, we have adopted a tiered approach to surgical training. We prospectively evaluated the learning curve with this approach.

Methods: During training, first tier fellows are responsible for safe laparoscopic access and control of the hepato-duodenal ligament. This index activity was used as the basis to judge progress. We prospectively evaluated candidates performing the index activity and recorded the following data: operative technique, completion time, activity-specific morbidity and estimated blood loss. Statistical analyses were performed with SPSS version 12.

Results: Over the study period, there were 58 operative procedures in which two candidates performed the index activity. There were seven activity-specific complications (12.1%) that included parenchymal lacerations/cautery burns (4), visceral injury (2) and vascular injury (1). Despite small case volumes, there was a notable trend after 17 cases, with reduced morbidity (from 14.7% to

8.3%), activity time (from 28.5 ± 6.1 minutes to 20.9 ± 4.4 minutes), blood loss (from 44.25 ± 38 ml to 41.13 ± 24 ml) and the requirement for assistance (from 5.9% to 0).

Conclusions: There is a trend toward improvements in activity time, activity-specific morbidity, and activity-specific blood loss once candidates have completed 17 first tier manoeuvres. This can be used as an index of progress in surgical training programmes.

Laparoscopic Heller myotomy in Jamaica

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Summary: Oesophageal achalasia is a rare disease characterized by a functional obstruction of the lower oesophagus. Non-operative treatments for this condition are sub-optimal with surgery providing the best long-term improvement in symptoms. The advent of laparoscopic surgery has further decreased the morbidity of surgery and is currently the accepted international standard of care for this disease. The authors review the introduction of laparoscopic myotomy to the Jamaican setting.