

ANNE HOLLMAN MEDAL 2014: PRESENTATION ABSTRACTS

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OUTCOMES OF KISSING STENTS IN AORTO-ILIAC DISEASE: A REVIEW OF ENDOVASCULAR INTERVENTION IN GLASGOW FROM 2007 to MID-2013

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Introduction

The kissing stent technique offers a minimally invasive alternative for the treatment of atherosclerotic lesions at the aortic bifurcation. It was developed in order to avoid certain complications such as dissection, thrombosis or significant residual stenosis. Outcomes of these interventions are reviewed.

Methods

Retrospective review of kissing stent outcomes performed in Glasgow between 2007 and 2013. Data was obtained via the RIS system by searching for the word 'kissing'. Further clinical information and follow-up was obtained from our electronic patient record system.

Results

A total of 50 kissing stent procedures were performed. The majority of lesions managed were TASC A or B (n=17 and n=23). Successful outcome rates at 1, 2 and 5 years were 89.8%, 84.8% and 80% respectively. Significant complications included acute limb ischaemia and pseudoaneurysm formation, however there were no long term sequelae. Groin haematoma was another non-significant complication encountered.

Discussion

The outcomes and complications of kissing stents used to treat aorto-iliac disease are comparable to the literature. It is a safe and effective technique with high successful outcome rates and low incidences of complications.

PREVALENCE, TYPES, FOLLOW-UP AND FINAL DIAGNOSES OF INCIDENTAL FINDINGS ON BODY MAGNETIC RESONANCE IMAGING; A SYSTEMATIC REVIEW

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BACKGROUND

Data on prevalence, types and final diagnoses may inform guideline development for managing incidental findings (IF) detected on imaging. We aimed to systematically review studies of IF discovered during cardiac or abdominal magnetic resonance imaging (MRI).

METHODS

We searched Medline and Embase for studies of adult patients or healthy volunteers undergoing cardiac or abdominal MRI, which reported the prevalence and types of IF. We extracted data on study population characteristics, and all data on prevalence, types, follow-up and final diagnoses of IF. We classified IF as potentially serious (could potentially threaten lifespan, quality of life or major body functions), non-serious, or unclassifiable. We classified potentially serious IF as suspected malignancy or non-specific.

RESULTS

We included 15 studies of 5,296 participants (mean age 48, 36% female). The prevalence of potentially serious IF was 8.5% in patients and 4.7% in healthy volunteers on cardiac MRI, and 7.0% in patients and 2.3% in healthy volunteers on abdominal MRI. Of the potentially serious IF, 41.4% on abdominal MRI and 23.4% on cardiac MRI were suspected malignancies. Only six studies systematically reported follow-up and/or final diagnoses of subsets of their participants.

CONCLUSION

An important proportion of patients and healthy volunteers who undergo imaging for clinical care or research will have potentially serious IF, many of whom will require follow-up. There is a lack of data on the follow-up and final diagnoses of IF to inform management guidelines, and longitudinal studies of unselected patients are required.

REFLECTIVE LEARNING WITHIN RADIOLOGY TRAINING

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Introduction

Reflective practice is defined as "intellectual and affective activities that individuals engage into explore their experience, which leads to new understanding and appreciations" (Boud 1985). Since the introduction of the ARCP and revalidation, reflective learning has become increasingly prominent on the RCR curriculum as a learning tool.

Methods

We surveyed the West of Scotland radiology registrars asking their understanding of reflective learning, the guidelines available to aid using the E-portfolio reflective learning tool and the usefulness of reflecting learning as part of the ARCP and personal development.

Results

We found radiology trainees had received poor guidance regarding the use of reflective learning logs, little or no feedback regarding their written logs and that most trainees would welcome guidance either locally or from the RCR on completion of reflective practice logs.

Discussion

There is an increasing evidence base within educational literature for the use of reflective learning in medical education. With the rise of Continuing Professional Development and ARCP trainees and consultants alike are required to use reflective learning as a personal development tool. We found poor guidance regarding the use of the tool and low quality feedback at a local level. GP and

Anaesthetic trainees have official college guidelines on reflective learning and as such produce useful high quality reflective logs. Within radiology reflective learning is an underutilised tool that could be improved with local education and direction. We discuss areas for improvement and future roles for reflective learning within radiology training and beyond.

8 PAEDIATRIC SCENARIOS FOR THE ON CALL TEAM

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Paediatric cases can be amongst the most intimidating to come across on-call, particularly in a hospital where the out of hours service is provided by the general on call team. The pathology is different to that seen in an adult population and the need to minimise radiation dose dictates different imaging strategies. In acknowledgement of this, this is a compilation of eight common paediatric presentations out of hours, how they present and how to tackle them.

1. Intussusception
2. Malrotation
3. Pyloric stenosis
4. Appendicitis
5. Ovarian torsion
6. Testicular torsion
7. Hydrocephalus
8. Trauma

PRE-OPERATIVE IMAGING OF PARATHYROID ADENOMAS

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Introduction

Providing accurate and sensitive pre-operative imaging in parathyroid adenomas allows a targeted surgical procedure, therefore reducing hospital stay and complications. All patients who underwent a parathyroidectomy, within NHS Grampian in a 5 year period were included. The pre-operative localisation imaging, histology and operation notes were compared and analysed to assess the sensitivity of USS and Sestamibi scintigraphy. Suggested targets were a sensitivities of: ultrasound 75%, Sestamibi scintigraphy 80% , combined 90%

Results

78 patient records were accessed with 11 excluded.

Ultrasound had 44 true positives, 21 false negatives and 2 false positives.

Sensitivity 67.7% Accuracy 65.7% PPV 95.7%.

Sestamibi had 48 true positives, 19 false negatives 0 false positives. Sensitivity 71.6% Accuracy 71.6% PPV 100%.

Combined had 55 true positives, 2 false positives, 10 false negatives. Sensitivity 84.6% Accuracy 82.6% PPV 96.5%

15 patient had conventional surgery(22.4%) (1 false positive) and 52 had targeted surgery (77.6%), there were 3 unsuccessful operations: 1 false positive and 2 due to technical difficulties.

Conclusion

Sestamibi proved more sensitive in detection of parathyroid adenomas, with a 100% PPV. It was suggested that with these results that an ultrasound only

would be required if the Sestamibi was negative however local surgeons felt that the ultrasound provided further invaluable detailed anatomical information which would otherwise not be obtained prior to surgery. Therefore we continue to perform both examinations. SPECT CT may prove to be the single test in the future since it provides both functional and anatomical information.

PROSTAR; THE EXPERIENCE OF A SINGLE CENTRE

Authors: Nath AF, Colgan F, Bhat R, Williams R
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Introduction

Suture mediated closure devices have been developed to facilitate rapid and effective haemostasis and arterial closure following Endovascular interventions. They provide an alternative to the surgical exposure and closure of the common femoral artery (CFA).

Methods

Prospective records of all ProStar deployments has been maintained in a dedicated database since the inception of its use in 2009. Using these records, the medical notes and the Picture Archiving and Communication System (PACS) have been examined to examine our results using this specific closure device.

Results

Since June 2009 our Institute has deployed 186 Prostar devices in 127 patients during 119 elective and 8 emergency procedures. The puncture was ultrasound guided in all cases. Cases were selected based on planning imaging. The majority of the procedures were aortic (n=100). It was also used in iliac (n=26) and carotid (n=1) procedures. Successful deployment was seen in 176 (94.6%) of cases. Surgical exploration and repair was required in 10 (5.4%) of cases.

Conclusions

We have found the Prostar device to be both reliable and safe in our experience to date with our results being comparable to the published literature. Concerns do exist in its use in particularly calcified vessels and also particularly obese patients.

SCREEN-DETECTED LOBULAR BREAST CANCER – DOES MRI MAKE A DIFFERENCE?

Authors: Dr Katie Sinclair, Dr Sophia Sakellariou
West of Scotland Breast Screening Centre

Introduction

MRI is used in invasive lobular carcinoma (ILC) to assess for multifocality and guide surgical planning. Recent studies cast doubt on the preoperative role of MRI. This study investigates whether MRI changed the management of screen-detected, ILC patients at our centre.

Methods

A retrospective controlled single-centre analysis of 138 screen detected ILC cases over a 3 year period from the West of Scotland Breast Screening Centre (WOSBSC) was performed. All patients had been MDT assessed for MRI requirement. We investigated whether preoperative MRI altered the initial management decision or reduced re-operation rates. Comparisons where possible were made with recent studies.

Results

44% (n=59) patients had pre-operative MRI. Of these, 41% had no additional disease, 38% had additional malignant or extensive disease and 21% had additional benign lesions identified. Surgical planning was affected in 41% patients. In contrast to the MONET study, primary mastectomy rates were not significantly different between the MRI and non-MRI groups, (32% and 31% respectively, $p=0.71$). The MRI group had a lower secondary surgery rate (8.5% vs 16.5%), however results did not reach statistical significance. Rates of re-excision were lower than in published series.

Conclusion

Within WOSBSC, MRI is used appropriately to guide primary surgery in screen-detected ILC cases and affects the initial management decision in 41% patients. It does not affect the overall initial mastectomy or re-operation rates, but reduces the likelihood of the latter. Re-operation rates were significantly lower than in similar studies.

INSTALLATION OF SPECT-CT AND ITS IMPACT ON PLANAR BONE SCAN INTERPRETATION – A SERVICE EVALUATION

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Aim

To evaluate impact of introduction of SPECT/CT in assessment of indeterminate uptake on planar bone scans.

Materials and Methods

Retrospective comparative study. First data set included all bone scans from June 2009- June 2010. After installing SPECT/CT in late 2010, it was used as a problem-solving tool in patients with indeterminate lesions. Second set of data included all bone scans (with added SPECT/CT if required) done from June 2011-June 2012.

Reports were categorised into- Normal, bony metastatic disease, degenerative changes, fractures/trauma, and incidental findings, and in-conclusive needing further investigation.

Results

First data set included 1422 reports. Second data set included 1617 reports. Latter also included 737 reports with added SPECT/CT.

In 2009/10, 16.5 % (234/1422) of scans showed bony metastases. 8.8 % (125/1422) were indeterminate requiring further investigations. 1.8 % (26/1422) showed incidental findings.

In 2011/12, 23 % (372/1617) of scans showed bony metastases. Reduction in the number of referrals for further investigations to 7.8 % (126/1617).

Increased pick up of incidental findings to 13 % (219/1617).

Looking at bone scans with added SPECT/CT for indeterminate lesions; the sensitivity for diagnosis of bone metastases was 30.1 % (222/737). Pick up of incidental findings was 27.13% (200/737). 10.2 % (75/737) of patients were referred for further investigations, most of them to assess incidental findings.

Conclusion

SPECT/CT had a significant impact with improved detection of bony metastatic disease, better characterization and reduction in onward referrals. Increased detection of incidental pathology, some of these required further investigations.