Radiographer Performed Paediatric Micturating Cystograms

A Solution to a Radiology Service Provision Problem

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Paediatric Micturating Cystograms

July 2002 – Agreement to take on new role

- Consultant Paediatric Radiologist handed in resignation

- MCUG service – 1 session per week to be covered

- Examination includes catheterisation of the child + antibiotics post procedure

- All other radiologists fully committed

- I had 9 years experience working with the Paediatric Radiologist
Paediatric Micturating Cystograms

Training Plan Development

• Contacted paediatric centres in England to check if other radiographers involved in this role – 1 found in England

• No formal training courses available

• Sought advice from Paediatric Radiographer who undertakes MCUG’s

(Liz Hunter – Newcastle RVI)

Adapted her training programme for my needs

No need to re-invent the wheel!
Paediatric Micturating Cystograms

Aug 2002

• 1 Week at Belfast Children’s Hospital (mainly for catheterisation)
• Training with the Paediatric Radiologist at South Tees until end Sept.’02

Portfolio

• Peer review publications – pathology, technique, complications, antibiotics
• Building up body of evidence of competence

Reflective diary

• Evaluation of progress and highlight problem areas
• Critical incidents – e.g. failure to catheterise caused a crisis of confidence.
  Evaluation of the reasons why it happened – not my technique!
Paediatric Micturating Cystograms

Aug ’02 – July ‘03 - 55 patients examined

• 10 patients examined in Belfast – supervised by radiographers
• 6 patients supervised by Paediatric Radiologist at South Tees
• 37 patients supervised by Urology Radiologist at South Tees

Designed Radiographer report form with audit data fields

- Catheterisation – 1 attempt or more than 1
- Completion of examination
- Reporting with / without radiological advice
- Complications
- Examination re-appointed - reason
- Dose
- Image quality
Assessment of Radiographer Reporting of Paediatric Micturating Cystograms

From August 2003

- All examinations performed independently
- Normal / uncomplicated reflux independently reported
- Complicated reflux 2nd read by radiologist
Reporting Paediatric Micturating Cystograms

<table>
<thead>
<tr>
<th>Control KUB</th>
<th>Filling Phase</th>
<th>Voiding Phase</th>
<th>Post Void</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft tissue shadows</td>
<td>Name/ volume contrast</td>
<td>Reflux – unilateral or bilateral</td>
<td>Bladder drained or residual urine post void.</td>
</tr>
<tr>
<td>Status of spine &amp; bony pelvis</td>
<td>Drip infusion or hand injection</td>
<td>Dilated or distensible ureters and / or collecting systems</td>
<td>Voided on table y / n</td>
</tr>
<tr>
<td>Presence or absence of opaque calculi or masses</td>
<td>Bladder contour</td>
<td>Clubbing of calyces</td>
<td>Reflux + Grade (1 – 5)</td>
</tr>
<tr>
<td></td>
<td>Presence or absence of bladder anomaly</td>
<td>Status of urethra</td>
<td>(International Reflux Study 1985)</td>
</tr>
<tr>
<td></td>
<td>Reflux on filling and / or voiding</td>
<td>Presence of posterior urethral valves in males</td>
<td></td>
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</table>
Complicated Reflux

- Potential for child to undergo surgery
- Complicated pathology - still a learning curve for me
Post Radical Prostatectomy Cystograms

2002 - 2003

- 1 year of undertaking / reporting the procedure under supervision
- Check for anastamotic leak
- No leak – catheter removed under fluoroscopic control
- Assessment of competence / accuracy of reports

2003 >

Radiologist/ Urologist agreement to new role
- Now radiographer managed examination with reduction in number of hand off’s in the care pathway
- No waiting time as previously if radiologist on annual leave
- Radiologist released to undertake more complex tasks
Adult Cystograms

Post Radical Prostatectomy
Micturating cystogram to check integrity of the anastomosis

Post Hysterectomy
Cystogram to check for vesico vaginal fistula
Other Urological Procedures

2003 >

• Performed after discussion with Radiologist

• Report independently then 2\textsuperscript{nd} read by Radiologist

Nephrostograms
### Service Improvement?

#### Service / Patient
- Continuity of the Paediatric MCUG service for South Tees patients
- Safe procedures – no report of complications post procedure
- Development of new information leaflets, consent forms, post procedure after care leaflets
- Development of policies / protocols – procedural, patient management
- Reduction in handoffs / waiting times
- Audit / research to be developed in conjunction with paediatricians

#### Fluoroscopy Team
- Extending the scope of role development for GI / Fluoroscopy radiographers
- Performing / reporting examinations other than barium enemas
- Developing the teaching role of GI radiographers
- Strengthening team working with radiologists
- Raising the profile of the GI radiographers and the Fluoroscopy team
- Closer working relationships with medics & other disciplines
What Have Been the Most Important Aspects of this New Role to Me

• Developing my own training plan / training schedule

• Realising that there is no consistent approach to the procedure even amongst specialist centres

• Refused application to radiologist study day on paediatric urology

• Reflection – working through a crisis of confidence in my own abilities

• Not being afraid to ask help – observation of my catheterisation technique by paediatrician

• Having the “right” staff working with you
  
  Competent / Supportive / Empathetic
  
  Having the right numbers of staff
# Role Redesign & Modernisation in GI Radiology

**South Tees NHS Trust**

## The Fluoroscopy Radiology Team

- Changes in roles supported by appropriate education & training
- Changed roles are protocol based, ensuring clarity, responsibility & safety
- Role changes are subject to evaluation

## Outcomes

- Improved patient services / waiting times
- Fulfilment of some of the 10 Key roles
- Introduction of the 4 Tier system
- Development of AHP’s with Special interests

(DOH. Gateway ref. 2141. Nov 2003)

## Consultant Radiologists

<table>
<thead>
<tr>
<th>GI Lead Radiographer Practitioner</th>
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<tbody>
<tr>
<td>• 1992 - Barium enemas</td>
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<tr>
<td>• 2002 - Paediatric micturating cystograms</td>
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<td>• 2004 - Proctograms</td>
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Any Questions?

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