Guidelines for Check X-rays Post Fractured Neck of Femur Surgery

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BACKGROUND
- 70-75,000 cases of fractured neck of femur annually in the UK
- 600 annual cases at SGH - 8th nationally
- £2 billion yearly cost to NHS
- Complex patients with multiple co-morbidities
- Clear national guidelines aimed at expediting treatment and early discharge
- NICE consultation announced 10/11 with emphasis on timing of surgery and mobilisation strategies
- Early mobilisation essential
- Delays due to:
  - Peri operative complications
  - Post operative pain
  - Lack of clarity in post-operative instructions
  - Delay in obtaining and reviewing post-operative check X-rays

METHODS
- 50 operation notes for patients who underwent hip hemiarthroplasties for fractured neck of femur over the months of December 2009-April 2010 examined
- Instructions regarding timing of check X-ray, check bloods and mobility recorded
- Actual timing of X-ray searched in PACS
- No exclusion criteria

POLICY AT SGH
- Agreed in 1998
- Surgeon to specify when happy for pt to mobilise PRIOR to check x-ray
- Routine check x-ray to be done on DAY 5 as poor image obtained when done earlier due to pt immobility
- If surgeon not happy for pt to mobilise it has to be specified and then check x-ray will continue to be DAY 1

IS POLICY KNOWN?
- Questionnaire sent to senior ward sisters
- 6 replied
- None of them were aware of the policy
- 2 answered X-rays needed to be done within 1-2 days, 1 within 3 days and 3 within 5 days
- All replied patients could mobilise prior to X-rays but this had to be documented

THE EVIDENCE
- Retrospective case note review of all pts undergoing NOF surgery sampled and results analysed as before
- Results of December 2009 examined
- Five acute implant related complications
- Five acute implant related complications
- All pts undergoing revision were clinically symptomatic
- Postal proforma sent to 450 randomly selected UK T&O consultants on whether check X-rays were taken and if patients were allowed to mobilise
- 300 responses

RESULTS
- Only 1 documented Intra-operative concern
- Policy not known or followed
- Surgeons not specifying patients can mobilise without X-rays consistently
- X-rays not picking up abnormalities

CONCLUSIONS
- Audit presented at local audit meeting with proposed new guidelines encompassing all fractured neck of femur surgery
- Recommended to continue to do check X-rays despite evidence for quality control/baseline X-ray/training
- Agreed guidelines distributed to wards and included on junior doctors and SpRs induction
- Guideline introduced 3/8/10
- Re-audit planned after 6 months with smaller audit at 2 months to check progress

CLOSING THE LOOP
- Interim Audit at Two Months
- Standards as before but conforming to new guidelines
- 30 patients undergoing any type of fractured neck of femur surgery sampled and results analysed as before

THEIR RECOMMENDATIONS
- Following DHS/cannulated screws check X-rays to be done only when clinically indicated
- Following hemiarthroplasty check X-rays to be done only if there are operative concerns or post operative complications

AGREED GUIDELINE
- Hemiarthroplasties
  - Check X-rays after DAY 3
  - Mobilise FWB from day 1 without a check X-ray unless otherwise stated by the operating surgeon
  - Intra-operative concerns clearly documented and X-ray scheduled as soon as possible, and pt to remain NWB till reviewed
  - Check bloods DAY 1
- DHS/Short IM nail/Cannulated Screws
  - Check X-rays will NOT be routinely performed unless otherwise stated by the operating surgeon
  - Pts to mobilise as per the operating surgeon's specific instructions
- Check bloods DAY 1
- Long IM nail
  - Check X-rays after DAY 3
  - Pts to mobilise as per the operating surgeon’s specific instructions
  - Check bloods will be done DAY 1

GROSS GRAPHIC DATA

X-ray request for DI
- Initial Audit: 34%
- Interim Audit: 3.4%
X-ray request unspecified/per protocol
- Initial Audit: 58%
- Interim Audit: 55.2%
X-ray not requested
- Initial Audit: 8%
- Interim Audit: 41.4%
FWB as able/routine
- Initial Audit: 90%
- Interim Audit: 79.3%
Not to WB till X-ray
- Initial Audit: 6%
- Interim Audit: 3.5%
FWB/TWB
- Initial Audit: 2%
- Interim Audit: 13.3%
FWB after 2 days
- Initial Audit: 2%
- Interim Audit: 0%
Compliance with protocol
- Initial Audit: 6%
- Interim Audit: 79.3%