Identifying patients at risk of delirium: a project for patients undergoing elective orthopedic surgery

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The next steps in orthogeriatrics

Background

- More than 8 years experience md/np seeing, treating geriatric orthopedic patients
- Post-op hip fractures
- Usual problems: constipation, UTI, pneumonia, pain, mobilization, discharge issues
- Delirium is a frequent and perplexing problem

Patients with delirium post elective surgery of hip or knee, frequently arthroplasty

- Consult requested by: nursing
  PT/OT
  orthopedics

- Unexpected event for all (patient, family, team) and very distressing

- Consequences: ↑ LOS
  ↑ complications
  occasionally disastrous social outcome

Case # 1

- Mr. Q. 68 years old
- Assessed in pre-op December 2011: elective total hip arthroplasty secondary to pain and decrease mobility
- Medical history: A.Fib., HTN, COPD, OA, mild dementia, decrease vision, motor degeneration NYD, hx of ETOH
- Medications: Aricept, Tylenol#3, Norvasc, Flovent, Coumadin, Ativan QHS, Baclofen for legs spasm

Case #1

- December 30th, 2011: THA (R)
- January 1st, 2012: hallucinations, aggressive, disoriented to the time, delusional, pain not well controlled, calls his wife at 03h00
- Wife is worried, speaks with surgeon: analgesics are stopped because they are obviously causing his delirium
- Geriatric consultation – important cognitive loss prior to surgery, more ETOH intake than stated, ↑ Ativan intake pre-op (insomnia and ↑ confusion at night)
- Information given to wife who asked why staff was not aware of his pre-op dementia and of his ↑ risk of delirium
- Discharge planned in 2 days

In retrospect

- Predictable
  - Neurological problem
  - Age
  - Cardiac issues
  - Elicitable history of dementia process, Aricept
- Distress
  - Wife
  - Patient
  - Team
- Prolonged and recurrent delirium leading to accelerated cognitive deficits and eventual nursing home placement

Quality improvement project - 2012

- To screen preoperitavely for candidates undergoing major elective orthopedic surgery who might be at increased risk of delirium postoperatively
- In order to intervene with information on delirium preoperatively and prepare milieu and team postoperatively

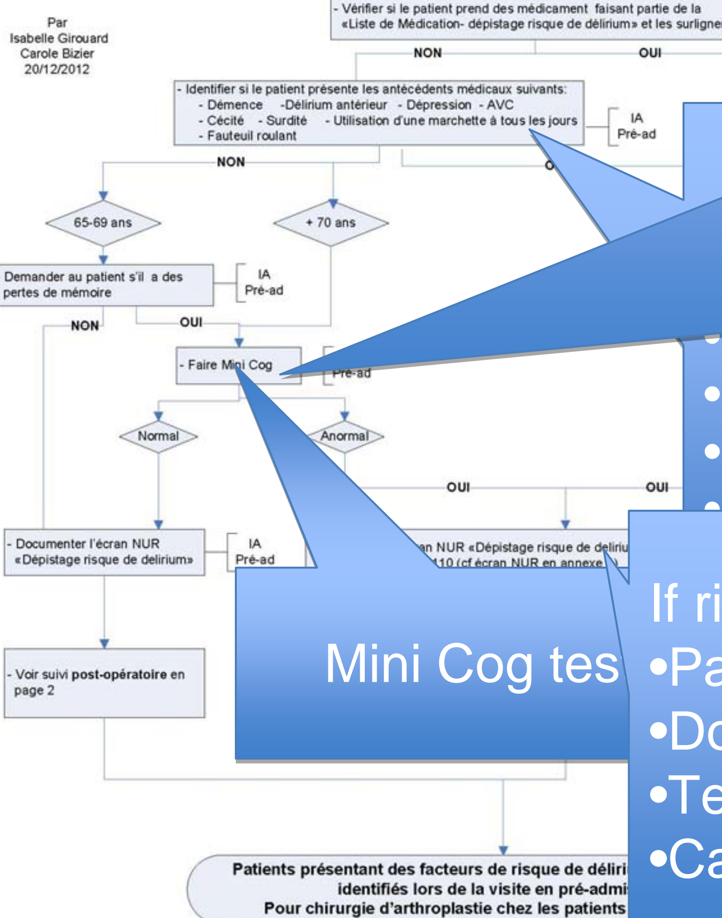
Risk Factors

- Type of surgery
- Age
- Previous delirium
- Dementia
- Decreased vision
- Decreased mobility
- Comorbidities, especially cardiovascular and neurological conditions
- Depression

Also…

- We are concerned about another small group of patients with undiagnosed cognitive deficits

- Therefore we decided to add a quick cognitive screening test: mini-cog to be done on patients over 70 years of age and not otherwise at increased risk (no known risk factors)



1. Patient 70+ and no risk identified and
2. Patient 65-69 with no risk but they identify a memory issue

•D
•D
•Depression
•Stroke

Mini Cog tes

If risk factors are present:
•Patient/family are advised
•Documentation handed
•Telephone call prior surgery (NP)
•Care team on surgery unit is advised

Results: 236 patients screened positive (at risk of delirium) between December 2012 and January 2014th

- Stroke - 5.5%
- Deafness -13%
- 2 WW - 5.5%
- Blindness – 1.6%
- Dementia – 0.4%
- Medications – 6%
- Previous delirium – 4.7%
- Depression 36%
- Parkinson 0.4%

- Abnormal Mini-Cog – 28% (not positive by other risk factors)

Conclusions

Definite

1. ↑ knowledge and awareness of delirium as an issue post-op elective orthopedic surgery in older population
   - ❑ Patients
   - ❑ Families
   - ❑ Care team
2. ↓anxiety and ↑ ability of care team to diagnose and respond to delirium – especially to patients and families
3. Note: no medications used prophylactically
4. No surgery cancellation

Probable

- More rapid and appropriate response by medical team to diagnosing underlying causative pathologies involved
- More appropriate and early treatment of signs and symptoms of delirium with nonmedical and medical interventions

Possible

- Prevention with forewarning of patient?
- Shortening of length and severity of delirium and poor outcomes?
- ↑ anxiety levels of patient and family (creating morbidity)
- ↑ workload for preop clinical team

Next Steps

- Orthogeriatric team formalized

- Future research/Follow-up projects, initiatives

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