Spinal Fusion for Adolescent Idiopathic Scoliosis Care Guideline

Inclusion Criteria: Spinal Fusion for Adolescent Idiopathic Scoliosis
Exclusion Criteria: Spinal Fusion for Neuromuscular Scoliosis, Spinal Fusion for other indications

Postoperative Assessment

- VS with BP and Pain Assessment per unit standards of care.
- Neurovascular assessment with vital signs.
- PACU: CVP, arterial line, cardio-respiratory monitoring; discontinue before transfer to floor (hemodynamically unstable patients will go to PICU.)
- Continuous pulse oximetry (while on PCA.)
- Labs: Hgb/Hct in PACU and on POD 1.

Pre-Op Patient/Family Education

- CHG product bath daily starting 3 days prior to surgery, per instructions.
- CHG cloth cleansing of surgical area, per instructions, one day prior to surgery.
- Begin Miralax 17gm daily, one day prior to surgery. If patient is constipated, start 2 days prior to surgery.

Postoperative Interventions

- IV Fluids as ordered

Clinical Nutrition

- POD 0: Start ice chips/advance to clear fluids, saltine crackers as tolerated.
- POD 1: Begin soft diet as tolerated ex: cereal, yogurt, applesauce, toast.
- POD 1 – given chewing gum 3x/day for 3 days. Chew for max 10 minutes. Do not give if sedated.
- POD 2: advance diet as tolerated.
- Decrease sugary drink intake (Gatorade, Juice), as this can increase nausea in postop patients if taken in larger amounts.

Respiratory Therapy

- Supplemental low flow oxygen therapy to maintain SpO2 >92%.
- Optimal pulmonary hygiene for prevention of post op atelectasis.
- Continuous pulse oximetry until PCA dc'd.
- Incentive spirometer 10 x per hour while awake.

Wound Care

- Change Dressing per MD order. *Note:* If dressing soiled or bloody, change as soon as possible. If sutures or staples: cleanse wound with CHG.
- Sequential compression devices per protocol or as ordered.
- Constavac suction as ordered; reinfusion per protocol on POD 0.
- D/C central line, arterial line, prior to transfer to the floor.
- Discontinue Foley catheter POD when patient is ambulating.

Medication Management

Antibiotic Prophylaxis

- Cefazolin
  30mg/kg IV q8h x 24 hours
  2,000 mg IV q8h x 24 hours (>60 kg)

Antiemetic

- Ondansetron – for 24 hours postoperatively –
  0.1 mg/kg/dose IV q8h (<40kg); 4 mg IV q8h (> 40kg)

Stool Softener/Laxative

Assess, daily, potential need related to opioid use for pain management

- POD 0: Famotidine 20 mg IV q 12 hrs
- POD 0, 1 and 2: Give Peri-colace BID **AND** start Miralax 17gm daily at night – nursing to use discretion based upon patients nausea, vomiting, tolerance of sips of clears, etc. If patient is only tolerating sips of clears, it is better if they sip clears with Miralax mixed in rather than not get any Miralax.
  * If **no** stool, give Miralax 17gm **AND** Peri-colace **AND** Dulcolax suppository - prn, per patient request and/or based upon nursing discretion.
  * Peri-colace Dosing:
    * Peri-colace 2 tabs BID until stool, then daily (> 6 yrs), hold for diarrhea
    * Peri-colace 1 tab BID until stool, then 1 daily (2-6 yrs), hold for diarrhea

Pain Management (see page 2 of 2)

Recommendations/ Considerations

- Indications for extending antibiotic prophylaxis beyond 24 hours post op described in CHOC Children's "Antibiotic Prophylaxis for Surgery Guideline."
- Refer to Nursing Policy "Pain Management (Pediatric)" and "Pain Assessment Scales (Pediatric)" include nursing assessment/interventions for pain management.

Activity/PT

- HOB: elevate as tolerated starting POD 0.
- POD 0: PT evaluation; up to side of bed with PT.
- POD 1-3: Progress as tolerated, out of bed activity under supervision of PT and/or RN.

Discharge Criteria

- Off all IV continuous pain meds x 24 hrs.
- Pain controlled with oral/G.T.T. pain meds only.
- Tolerating pre-procedure diet .
- Meets PT d/c criteria (patient able to maintain back precautions, ambulate 80 meters, and perform stairs if indicated, with family assistance if necessary).
- Normal VS
- Returned to prior bladder function.
- Bowel function addressed.

Patient/Family Education

- "Spine Discharge Instructions" - given in clinic during preop visit
- Instruct family on SSI, CAUTI, CLABSI, and VTE prevention.

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Reassess the appropriateness of Care Guidelines as condition changes and 24 hrs after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The physician should deviate from the guideline when clinical judgment so indicates.

Spinal Fusion for Adolescent Idiopathic Scoliosis
Care Guideline - Pain Management

Dilaudid (Hydromorphone)

Dilaudid (Hydromorphone) continuous and/or demand PCA
- <50 kg: Continuous rate: 0.1mg/hr; demand dose: 0.1mg
- 50 kg or >: Continuous rate: 0.1 mg/hr; demand dose: 0.2mg
- PCA lockout time: 10 minutes

Breakthrough pain dose
- <50 kg: Dilaudid (Hydromorphone) 0.004mg/kg IV q2h prn pain (4-10)
- 50 kg or >: Dilaudid (Hydromorphone) 0.2mg IV q2h prn pain (4-10)

****Maximum hourly infusion: based on continuous and demand doses****

Acetaminophen IV
- <50 kg: Acetaminophen 15 mg/kg IV q6h for 3 doses
- 50 kg or >: 1,000 mg IV q6h for 3 doses

Post Operative Pain Management Timeline*

POD 0:
- Hydromorphone 0.1mg basal/0.1-0.2 mg push; lock out time 10 mins
- Gabapentin 300 mg po TID

POD 1:
- Discontinue basal PCA dose; continue demand dose – Goal is to have basal PCA removed by 1200
- Gabapentin Continue
- Start Acetaminophen/hydrocodone 5 mg/325 mg 1 tab po q 6 hrs at 10-16-22-04
- Ketorolac 0.5 mg/kg IV q 6 hrs x 48 hrs
- Benadryl (diphenhydramine) – IV, IM, Oral – 1 to 2 mg/kg/dose; may repeat every 6 hours; maximum daily dose -6 to 11 years: 150mg/day; > 12 years: 300mg/day (double check dosages)

For Breakthrough pain:
- Acetaminophen/hydrocodone 1 tab po q 3 hrs prn (> 50 kg), may give 1 hrs after regular Norco dose.

****Consider Acetaminophen from all sources, <50 kg, max 5 PRN doses****

****Use Acetaminophen/hydrocodone prior to Hydromorphone for breakthrough pain****

POD 2:
- Discontinue PCA
- Continue Acetaminophen/hydrocodone – Gabapentin – Ketorolac

POD 3: Discharge home

*** Consult Pain Service if pain uncontrolled**

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Spinal Fusion for Neuromuscular Scoliosis Care Guideline
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Reference List

Aleissa, S, et al. Deep wound infection following pediatric scoliosis surgery: incidence and analysis of risk factors; *Canadian Journal of Surgery* (2011), August; 54(4): 263- 269. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3191901/

Blakemore, L. et al. Preoperative Evaluation and Decreasing Errors in Pediatric Spine Surgery, *Spine Deformity* (2012) September; 39-45.

CHOC Children's "Antibiotic Prophylaxis for Surgery Guideline" Pathway: PAWS; Resources; Care Guidelines
http://paws/careguidelines/AntibioticProphylaxisForSurgeryGuideline.pdf

Mo, F. and Cunningham, M. E. Pediatric Scoliosis; *Current Reviews in Musculoskeletal Medicine (2011)* December; 4(4): 175–182. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3261245/

Sugrue, P, et al. Protocol Practice in Peri-operative Management of High-Risk Patients Undergoing Complex Spine Surgery, *Spine Deformity (*2012) September; 15-22.