Clinical Pathway/Protocol Approval Form

Physical Abuse: Initial Evaluation and Management

Title

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I approve the attached version of this Clinical Pathway or Protocol.

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PHYSICAL ABUSE: INITIAL EVALUATION AND MANAGEMENT

**Child Protection MD is available by pager for questions or formal consultation**

I. RECOGNITION
   A. History
      1. Unexplained or un-witnessed injury
      2. Conflicting, inconsistent or developmentally inappropriate
      3. Delay in seeking care
   B. Physical
      1. Altered mental status
      2. Closed head injury
      3. Fractures: skull, rib, long bone, multiple fractures, differing ages
      4. Oral injuries
      5. Bruising in a non-mobile infant, regardless of location
      6. Burns: circumferential, scalds, patterns, or diaper area
      7. Subdural hematomas
      8. Abdominal injury: liver lacerations, ruptured viscus

II. EVALUATION
   A. Children 0-12 months old
      [see Appendix 1]
      1. Skeletal survey (2 cranial views, AP and lateral CXR, oblique views of the ribs, KUB, AP Pelvis, all long bones, hands and feet)
      2. Head CT (non-contrast)
         a) If abnormal, ophthalmology consult for dilated funduscopic exam.
         b) If abnormal, consider neurosurgical consult
      3. General Pediatric Surgery Consult in any case with exam or lab findings concerning for abdominal trauma [see Appendix 3]
      4. Laboratory Collection
         a) Chem-10
         b) Non-Accidental Trauma panel (CBC, PT, PTT, AST, ALT, ferritin)
         c) Amylase & lipase
         d) Urinalysis
         e) If altered or seizing, order urine tox screen
   B. Children 12-24 months old
      [see Appendix 2]
      1. Occult abdominal injury screening (AST/ALT)
      2. Skeletal survey based on chief complaint
      3. If there is a concern for inflicted neurotrauma based on H&P, proceed as above in #2-5
   C. Children > 24 months old
      1. Occult abdominal injury screening (AST/ALT) [see Appendix 3]
      2. X-ray as indicated
      3. Complete skeletal survey is recommended for specific patients:
         a) Burn victims or disabled children who are non-mobile
         b) Multiple fractures suspected

III. REPORTING
   A. Notify attending physician on duty of concern for inflicted injury
   B. Social worker on call is to be notified of any and all cases of suspected inflicted injury
   C. Ensure Child Protective Services is notified. 1-800-252-5400

IV. DOCUMENTATION
   A. HPI: Timing and mechanism of injury. Source of history; if differing information, delineate different authors
   B. PMH: Screen for alternate medical explanations for injury
   C. PE: Specifically describe appearance, location, and size of injury
   D. Reporting: Document agencies notified, note case numbers
      1. Complete Physician’s Report of Injury to a Child
      2. Photodocumentation as needed

V. DISPOSITION AND FOLLOW-UP
   A. Social work and CPS, once notified, will assist in disposition
   B. If fracture present on skeletal survey, or if patient age < 12 months, repeat skeletal survey in 2 weeks
      1. Follow-up films will NOT include skull views
      2. Indicate that follow-up film results should be reported to Child Protection MDs (Dr. Isaac or Dr. Donaruma) if the patient’s PMD is not involved with case
   C. Sibling/cohort evaluation of all other children who share environment of the injured child is needed
   D. Follow-up appointment at Children’s Protective Health Clinic if repeat assessment needed. 832-822-3453

Created by: Marcella Donaruma, M.D.
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Abnormal findings including:
- acute bleed, cerebral edema, cortical contusion, infarct
- acute fractures
- callous formation
- periosteal reaction

Laboratory evaluation
- Ammonia, urine amino acids, urine organic acids
- serum amino acids
- Ca, Phos, PTH, 1,25-OH Vit D, Bicarbonate < 15 mmol/L
- Blood gas
- Chem-10, NAT Panel (includes: CBC, PT, PTT, ALT, Ferritin, Amylase, Lipase, Urinalysis)

Follow-Up
- Will require follow-up study in 2 weeks.
- Results to be sent to Dr. Isaac or Dr. Donaruma on order request.

Neurosurgical Consult

Toxicology Screen

Abnormal findings including:
- signs of abdominal injury on physical exam or laboratory evaluation

Child Protection Physician consult available by pager!

Child 0-12 months
Concern for inflicted injury

Laboratory Evaluation

Head or facial trauma

Appendix 1

Children's Protective Health Clinic
832-822-3453
Child 12-24 months
Concern for inflicted injury

Head CT

Skeletal survey

Laboratory evaluation

Chem-10, Non-Accidental Trauma Panel (Includes: CBC, PT, PTT, AST, ALT, Ferritin), Amylase, Lipase, Urinalysis

AST/ALT

Screen for occult abdominal injury
[See Appendix 3 ]

If physical exam abnormalities present (i.e., altered mental status, bruising)

Abnormal findings including: signs of abdominal injury on physical exam or laboratory evaluation

Surgical Consult

+ Abnormal findings including: acute/chronic bleed, cerebral edema, cortical contusion, infarct

+ Abnormal findings including: acute fractures, callous formation, periosteal reaction

Follow-Up

+ Skull fracture or C-spine injury

1,3,19,20,25,29,32

19,23

+ Head or facial trauma

Will require follow-up study in 2 weeks. Indicate to send results to Dr. Isaac or Dr. Donaruma on order request

Consider Neurosurgical consult

5,17,19

If clinically indicated:
Patient is not yet ambulatory, visible swelling/deformity, refusal to move limb, refusal to bear weight

If clinically indicated:
Altered mental status, seizures, abnormal neurological exam, developmental delay

Toxicology Screen

8,9,18,26

Child Protection Physician consult available by pager!

8,9,18,26

Created by: Marcela Donaruma, MD
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Guidelines for the Use of Elevated Liver Transaminases in Detecting Occult Liver Injury in Child Abuse

Age 0-60 months with concerns for acute inflicted injury
Findings may include but are not limited to unexplained bruising, burns, bleeding, fractures

Measure AST and ALT (fingerstick)

Hemodynamically stable and GCS > 13

AST < 200 and ALT < 100
No further intervention recommended

AST > 200 and/or ALT >100
CT scan Abdomen with contrast

Hemodynamically stable and GCS > 13

Hemodynamically unstable or GCS < 13

Unreliable/ changing abdominal exam

Axial bruising

Thoracic injury of any type

Consult pediatric surgery

Proceed with trauma protocol

7,10,14,16,24,28

Created by: Marcella Donaruma, MD
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