In an ongoing effort to improve the care of injured patients within our region, we will be publishing summaries of clinical practice guidelines created by the Eastern Association for the Surgery of Trauma (EAST) and other Trauma and Critical Care organizations. This month’s practice management guideline covers the management of cervical spine injuries.

The member directory has been updated in this issue and will be republished on a biannual basis. If anyone wishes to contribute editorials, current research, or articles please forward them to me. The submission deadline for inclusion in the next edition of the newsletter is the 18th day of each month. As always, we are here to serve the members of the NYC-RTAC. Suggestions for future guidelines and other resources are welcome.

Akella Chendrasekhar, MD FACS
Trauma Director
Richmond University Medical Center
Staten Island, NY

PRACTICE MANAGEMENT GUIDELINES

Summary of Guidelines for the Management of Cervical Spine Injuries Following Trauma:

1. Removal of cervical collars
   a) Cervical collars should be removed as soon as feasible after trauma

2. In the patient with penetrating trauma to the brain
   a) Immobilization in a cervical collar is not necessary unless the trajectory suggests direct injury to the Cervical Spine [CS]

3. In awake, alert patients with trauma without neurologic deficit or distracting injury who have no neck pain or tenderness with full range of motion of the CS
   a) CS imaging is not necessary and the cervical collar may be removed

4. All other patients in whom CS injury is suspected must have radiographic evaluation. This applies to patients with pain or tenderness, patients with neurologic deficit, patients with altered mental status, and patients with distracting injury.
   a) The primary screening modality is axial CT from the occiput to T1 with sagittal and coronal reconstructions
   b) Plain radiographs contribute no additional information and should not be obtained
   c) If CT of the CS demonstrates injury then a spine consultation [neurosurgery or orthopedic] should be obtained
   d) If there is a neurologic deficit attributable to a CS injury, in addition to the spine consultation, obtain an MRI
   e) For the neurologically intact awake and alert patient complaining of neck pain with a negative CT, Cervical collar should be continued, may be removed after negative MRI or negative and adequate flexion and extension films.
   f) For the obtunded patient with a negative CT and gross motor function of all four extremities, flexion and extension films should not be performed. MRI use may be individualized, Cervical collar may be removed on the basis of a negative CT or negative MRI.
Long Term Outcomes After Mild Traumatic Brain Injury
Shinn E, Pate A, Pinto F, Chendrasekhar A

Traumatic brain injury (TBI) affects over 1.7 million patients per year according to Centers for Disease Control estimates. Post-concussive syndrome (PCS) is a poorly defined constellation of heterogeneous symptoms with reported incidence ranging from 15 to 80% after mild TBI. Our objective is to examine the incidence of self-reported PCS symptoms in patients with mild TBI within three to six months post-injury with particular focus on psychological impairment.

We conducted a telephone-based survey in February 2014 of 204 patients with mild traumatic brain injury diagnosed at an urban level-I trauma center between August and November 2013. A standardized questionnaire was used to collect data on presence or absence of headaches, weakness, numbness, coordination impairment, speech impairment, nausea, vomiting, confusion, short-term memory impairment, nightmares, apathy/anhedonia, and depressive symptoms.

Fifty-two patients with a mean age of 43.63 ± 6.66 years responded. Headaches (53.8%), coordination impairment (40.4%), depression (38.5%), short-term memory impairment (36.5%), numbness (34.6%) and apathy/anhedonia (30.8%) were most commonly reported. Less frequent were weakness (26.9%) nausea (25%), nightmares (23.1%), confusion (21.2%), vomiting (17.3%), and speech impairment (9.6%). Mean headache intensity was reported to be 6.28 ± 0.81 on a scale of one to ten. Frequent or daily complaints were noted in 81.25% of patients with reported anhedonia/apathy and 55% of patient with depressive symptoms.

Headache remains the most common complaint after TBI. Nearly 40% of patients report depressive symptoms within three to six months post-injury. Long-term follow-up and periodic screening examinations should be considered in these patients.

Hyponatremia On Initial Presentation Correlates With Suboptimal Outcomes In Patients With Traumatic Brain Injury
Pate A, Ponukumati S, Chendrasekhar A

Metabolic derangements often occur in the setting of acute cerebral insult. The objective of this study is to determine whether the presence of hyponatremia on initial presentation affects outcome in patients with acute traumatic brain injury (TBI).

We performed a retrospective study of all adult patients aged > 14 years involved in a low-speed pedestrian-struck motor vehicle collision (<15 miles per hour) who presented to an urban level-I trauma center over the course of January 2013 to November 2013. Subjects were identified via the trauma registry and stratified into two groups: those aged 15-49 years and those aged ≥50 years. Medical records were reviewed for demographics, vital signs and laboratory results on initial presentation, presence or absence of systemic inflammatory response syndrome (SIRS), shock index (SI), injury severity score (ISS), length of stay (LOS), and survival to discharge. Statistical analysis was performed using chi-square analysis or t-test as appropriate.

Our sample included 145 patients, 68 male and 77 female, with a mean age of 41.9 ± 3 years. Ninety-five patients were aged 15-49 years (mean 31.9 ± 2.2 years) and 50 patients were aged 50 years or older (mean 62.44 ± 2.9 years). Mean ISS was 10.5 ± 1.95, mean SI was 0.68 ± 0.03, and mean LOS was 3.67 ± 0.57 days. Forty-one patients were found to meet SIRS criteria on arrival; nine patients expired (6.2% mortality). Mean ISS (15.64 ± 4.42 vs 7.1 ± 1.64, p<0.001) and mean SI (0.75 ± 0.07 vs 0.65 ± 0.03, p<0.002) were higher in patients aged ≥50 years. Mean LOS was longer in patients aged ≥50 years (5.22 ± 1.14 vs 2.85 ± 0.58 days, p<0.001). Age ≥50 years was found to be positively correlated with SIRS on arrival (p=0.023) and negatively correlated with survival to discharge (p=0.004).

Age ≥50 years is correlated with greater traumatic injury and suboptimal outcomes in patients involved in low-speed pedestrian-struck motor vehicle collisions as measured by ISS, shock index, SIRS on initial presentation, length of stay, and survival to discharge. Further large-scale research would be necessary to determine whether these findings are reproducible.

Advanced age (≥50 years) is correlated with morbidity and mortality in patients involved in pedestrian-struck low-speed motor vehicle collisions.
MEETING UPDATES

Regional Trauma Advisory Committee of New York City
Trauma Coordinator/Registrar Committee
March 3 2014
MINUTES

I. Call to Order
Janet Cucuzzo called the meeting to order at 1:00 PM in the Farbar Auditorium at Bellevue Hospital

II. Approval of Meeting Minutes
The minutes from Oct 2013 were read and approved.

III. Old Business
A. Injury Prevention
   1. Trauma Centers are adding the Injury Prevention Coordinator to their program.
   2. Elmhurst Injury Prevention Coordinator is Mark Hoffacker

B. NTRACS/Trauma One
   1. Both Programs will have updated software for ICD-10

IV. New Business
A. ATS News
   1. New Board 2014-2015
      a. Linda Schwab RN President
      b. Chris Sorrentino RN President Elect
      c. Jeanne Rubsam RN Vice President
      d. Eric Cohen RN Treasurer
      e. Michelle Kelly Secretary

B. STAC Data Committee
   a. SPARCS Exclusions list sent to all centers. If corrections are not submitted to the State your center will not be included in the 2010-2012 report.
   b. All centers are required to update their registry with AIS -05 by Jan 2014.
   c. State report will be a "risk adjusted" data report similar to TQIP.
   d. New Data dictionary will be ready in July 2014

Systems/Survey
   a. SUNY Upstate Verified as a Level I Adult and Pediatric center in January 2014.
   b. Rochester scheduled for a verification visit.
   c. Most NYC centers have had Consultative visit. All are scheduled.

Education Committee
   a. Judy Jax is the new Chair of the Education Subcommittee. She sent out a survey regarding the needs for educational programs throughout the State. The emphasis seems to be AIS and ICD-10 training.

C. New Business
   1. State requested a report from the RTAC of 3 main issues that the region would like help in resolving.
   2. A Survey will be sent out to the region in regards to:
      a. Missing FDNY Ambulance run sheets
      b. Missing Private Ambulance Run Sheet
      c. Incomplete Run Sheets
      d. Pre notification

V. Adjournment
The meeting was adjourned at 2:00pm. The next meeting will be held at Bellevue Hospital, date to be announced.

Respectfully submitted,
Mary Ellen Zimmermann BSN

Regional Trauma Advisory Committee of New York City
March 3 2014
MINUTES
I. Call to Order
Dr. Simon called the Meeting to order at 2:00pm in the Faber Auditorium at Bellevue Hospital

II. Approval of minutes
The October 2013 minutes were read and approved.

III. Liaisons
A. Injury Prevention
   1. Injury and Violence Prevention Presentation form NYC Department of Health and Mental Hygiene.

B. NTRACS/Trauma One
   1. Both programs will have updated software for ICD-10.

C. STAC Data Committee
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Education Committee
   1. Judy Jax is the new Chair of Education Subcommittee. She sent out a survey regarding the needs for educational programs throughout the State. The emphasis seems to be AIS and ICD-10 training.

Evaluation
   1. No Report

D. FDNY
   1. Chris Sorrentino and Eric Cohen from Staten Island University
   2. Hospital are representatives of the RTAC at RMAC.

The hospital representatives of NYC EMS met at NYHQ in January to discuss the collaboration with Pre-Hospital
and Trauma Centers to meet the ACS standards. PI initiatives were discussed.

E. ATS News

1. New Board 2014-2015
   a. Linda Schwab RN President
   b. Chris Sorrentino RN President Elect
   c. Jeanne Rubsam RN Vice President
   d. Eric Cohen RN Treasurer
   e. Michelle Kelly Secretary

2. Awards of distinction 2013
   a. Trauma Program Manager Krista Sokolowski RN
   b. Trauma Registrar Mary Ives

F. RTAC

1. State requested a report from the RTAC of 3 main issues that the region would like help in resolving.
2. Survey will be sent out to the region in regards to:
   a. Missing FDNY Ambulance run sheets
   b. Missing Private Ambulance Run Sheet
   c. Incomplete Run Sheets
   d. Pre notification

IV. New Business

1. Change of Trauma Program Manager/Registrar meeting format. Two Subcommittees to meet before RTAC.
   a. PI Subcommittee Chaired by Matt Conn PI Coordinator at Jacobi
   b. Injury Prevention Chaired by Sally Jacko, Anju Galer
   c. These committees will report at RTAC

2. Dr Cooper informed the RTAC that there is a legislative Bill from Hannon and Godfrey supporting the release of Autopsies to Trauma Centers for PI/QA.

3. New Member, Maimonides Medical Center, is in the process of achieving Trauma Center designation

4. Ron Simon suggested a Regional Newsletter. Will discuss at next meeting

5. Jacobi Symposium is May 7 2014.

6. Suggestion to form a Disaster subcommittee. Will discuss at next meeting.

V. Adjournment

Meeting was adjourned at 4:00pm. The next RTAC meeting will be at Bellevue Hospital, date to be announced.

Respectfully submitted,

Mary Ellen Zimmermann BSN
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