SPORT-RELATED CONCUSSION 101

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OVERVIEW

• DEFINITION
• CONCUSSION EVALUATION
• SYMPTOMS & SIGNS
• CONCUSSION MANAGEMENT
QUIZ TIME!

1. A concussion is just a “bump” to the head.
2. A concussion is usually diagnosed by CT scan/MRI.
3. Loss of consciousness is required to be called a concussion.
4. A parent should awaken a child who falls asleep after a head injury.
5. Physician clearance allows an athlete to return to play.

What is a concussion?

- It is a type of mild traumatic brain injury (mTBI). It is NOT a “ding” or “bell rung”.
- Concussion: A violent jar or shock; to shake violently.
- An indirect force – a hit to the body, not the head- can cause a brain injury. One does NOT have to get hit in the head/face to result in being concussed.
ALL CONCUSSIONS ARE SERIOUS.

South Carolina State Law (1)

- Requires concussion info distributed to all athletes, parents & coaches.
- If concussion suspected, athlete removed from play, evaluated by MD, AT, PA or NP.
- Must obtain written clearance by MD.
5TH International Conference on Concussion (2)

October, 2016

First conference held in 2001
Consensus Statement on Concussion in Sport

“Sport-Related Concussion”
A traumatic brain injury induced by biomechanical forces. (1)
11 R’s
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- 1. Recognize
- 2. Remove
- 3. Re-evaluate
- 4. Rest
- 5. Rehabilitate
- 6. Refer
- 7. Recover
- 8. Return to play
- 9. Reconsider
- 10. Residual effects
- 11. Risk reduction

4 Most Important Steps

1. Recognize. Observe. Keep eyes on event!
2. Remove. STOP further activity.
4. Recovery Begins with monitoring.
Concussion

• An evolving injury
• Rapidly changing clinical signs & symptoms
• Among most complex injuries in sports to diagnose, assess and manage
• There is no perfect diagnostic test

A concussion is not just a “bump on the head”

• Symptoms can range from mild to severe
• Usually include headache, dizziness, balance issues, confusion
• The severity of symptoms cannot be predicted at the time of injury
Mechanism of Injury

- **A history of a blow to the head or body – the mechanism of injury – should warrant immediate removal of athlete from activity and begin observation of symptoms.**

- “When in doubt, sit them out”.

Common Concussion **SYMPTOMS:**

- Headache
- Confusion
- Sensitive to light/noise
- Feel “slowed down”
- Difficulty concentrating
- Irritability

- Dizziness
- Pressure in head
- Memory loss
- Feel “in a fog”
- Drowsiness
- Sadness

- Nausea
- Blurry vision
- Neck pain
- “Don't feel right”
- More emotional
- Anxious/Nervous

- Score on 0-6 scale (none = 0, 1-2 mild, 3-4 moderate, 5-6 severe)
Common Concussion SIGNS

- Appears dazed or stunned
- Confused; unsure of orientation(name, venue)
- Forgets instructions
- Moves clumsily; poor balance, stumbles
- Answers questions slowly, inaccurately or
- Behavior/Mood changes (aggressive, sobbing)
- Just “not feeling right”
- Vomiting

Pre-existing conditions can affect concussions:

- History of prior concussions - Age
- Motion sickness - Gender
- Visual problems - Migraines
- Learning disabilities

• ALL may increase chances of sustaining a TBI or lengthening recovery
CT SCANS CANNOT DETECT TBI.

A CONCUSSION CANNOT BE DETECTED BY MRI.

A CONCUSSION IS A “FUNCTIONAL” INJURY, NOT STRUCTURAL. (3)

CT scan or an MRI:

• Used to rule out bleeding in the brain
• NOT a test for concussion
• A negative scan does not mean a concussion did not occur
Dangerous Signs of Concussion

- Loss of consciousness greater than 1 minute
- Unequal pupils
- Increasing HA (despite normal Tylenol dose)
- Vomiting, convulsions, seizures
- Slurred speech
- Increasing confusion or agitation

Keeping the injury to themselves...

- 40-70% of HS football players failed to report symptoms (4):
  - “wasn’t serious enough to report”
  - “Didn’t want to leave game”
  - “Didn’t realize I had a concussion”
  - “Didn’t want to let down teammates”
Back to four “R’s”

- Recognize
- Remove
- Refer
- Recover

Do the RIGHT THING!

When in doubt,
Sit them out!

- Mechanism, Signs
  and/or
- Symptoms
Recognize:

• Player down:
• Standard emergency management principles:
  • Conscious? Breathing? Pulse?
• Clear cervical spine injury!
  – “Where does neck hurt?”
  – “How bad does neck hurt”?
  – “Can move extremities”? Compare strength

REMOVE

• Safely remove athlete from practice/play
• Assess symptoms
• Never leave athlete alone
• Monitor for deterioration
• NEVER return to activity on same day
• Do NOT allow athlete to drive
One symptom.....or many....

• Daily symptom check
• Physician clearance
• 5-day Return to Play ONLY, after symptoms subside, even with MD clearance!

QUESTIONS?
References

2. https://bjsm.bmj.com/content/51/11/838
3. AOSSM Sport Tips  www.sportsmed.org

Mira 2 years, 10 months