Use of the Independent Medical Spotter in Identifying Head and Neck Injuries in Division I Football Players

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BACKGROUND

- Sport-related concussion [SRC] is a known risk of contact sports and requires prompt and accurate diagnosis in order to remove athletes from play.
- Strategies have been employed to help minimize risk of SRC and have included changes in rules of various sports along with equipment modifications.
- Multiple NCAA conferences and professional sports leagues have instituted independent medical spotter [IMS] policies to serve as "eyes in the sky" during competition to help identify potential SRCs.
  - Provides an extra layer of protection to athletes in addition to the sideline medical staff [SMS].

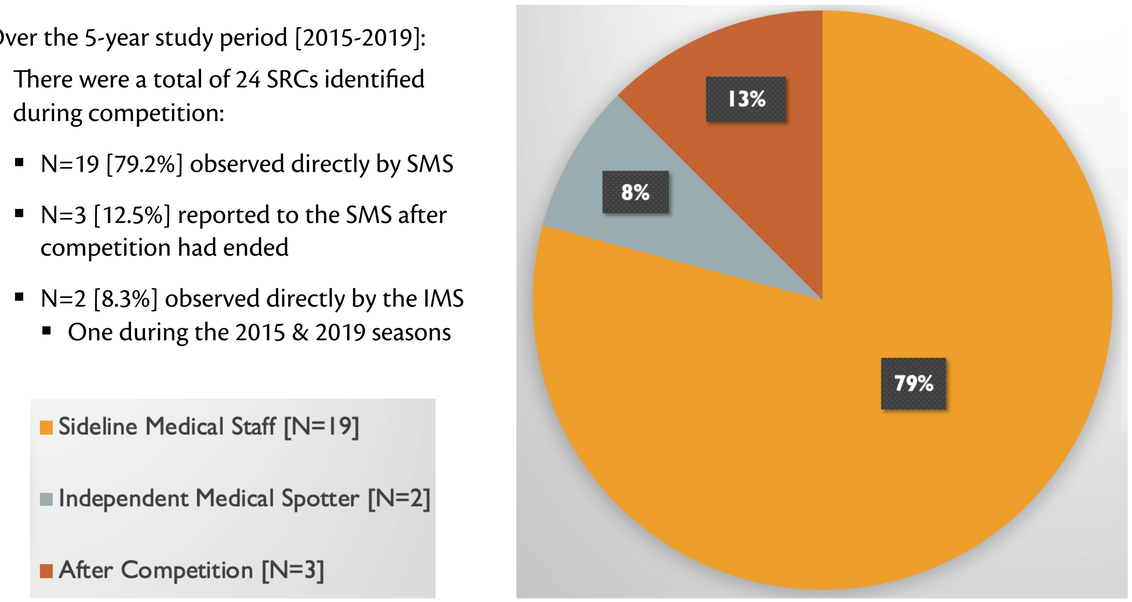
METHODS

- *Design and Setting*
  - Prospective observational study of SRC occurring during Division I football games at a Big Ten conference school in the 2019 season.
  - Retrospective review of SRC occurring during competition in the 2015-2018 seasons was also completed as these seasons utilized an IMS.
  - The occurrence of SRC was recorded during each competition over the study period, including whom observed the injury.
  - Student athletes diagnosed with SRC who first reported symptoms following competition were recorded as such and included in analysis.
- *Participants*
  - Student athletes who were members of the football team and participated in competition were included in this study.
- *Statistical Analysis*
  - Descriptive statistics were used to compare the total number of SRCs which occurred during competition in the 2015-2019 football seasons and who observed the SRC – the SMS or the IMS – or if a student athlete reported symptoms following competition.

The use of an independent medical spotter ***may provide*** an added ***player protection benefit*** utilizing a different vantage point to identify SRCs during competition.

RESULTS

- Over the 5-year study period [2015-2019]:
  - There were a total of 24 SRCs identified during competition:
    - N=19 [79.2%] observed directly by SMS
    - N=3 [12.5%] reported to the SMS after competition had ended
    - N=2 [8.3%] observed directly by the IMS
      - One during the 2015 & 2019 seasons



CONCLUSIONS

- Over the past five seasons of collegiate football games at a Division I institution in the Big Ten Conference, the vast majority of competition SRCs are accurately identified by the SMS.
- There are a small number of potential competition related SRCs that were apparent only to the IMS.
- An IMS seemed to add sensitivity in detecting competition related SRCs overall.
  - However, there remain instances in which SRC recognition and diagnosis were delayed despite trained SMS and an IMS.

ADDITIONAL KEY INFORMATION

- **Independent Medical Spotter [IMS]**
  - The IMS for all seasons reviewed were two independent licensed athletic trainers [LATs] with over 20 years of experience at the collegiate and professional levels.
  - An IMS can stop competition, if concern for injury, as well as communicate with the SMS in order to further evaluate student athletes.
- **Sideline Medical Staff [SMS]**
  - The five LATs of the football team
  - The four sports medicine physicians covering
    - Faculty/Fellow Orthopaedic surgeons
    - Faculty/Fellow Primary Care Sports Medicine
  - Each member of the SMS were present on the team's sideline for the duration of competition.
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