The Epidemiology Of Sports-Related Sternoclavicular Joint Dislocations in the United States

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DISCLOSURE

Disclosures:

The authors have no relevant disclosures.

Disclaimer:

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BACKGROUND

Background

- Sternoclavicular (SC) dislocations are rare yet dangerous injury patterns that can be challenging to diagnose[1-3]
- Cave et al. (1958)[1] estimated that SC dislocations comprise 3% of dislocations involving the shoulder
- Most orthopaedic surgeons will not treat a SC dislocation in their career[4]

Purpose: Provide an updated epidemiological analysis of primary, acute SC dislocations from athletic activities seen in US Emergency Departments (EDs) over 20 years

METHODS

Design: epidemiological, cross-sectional, descriptive assessment of SC dislocations from 2001 – 2020

Database:

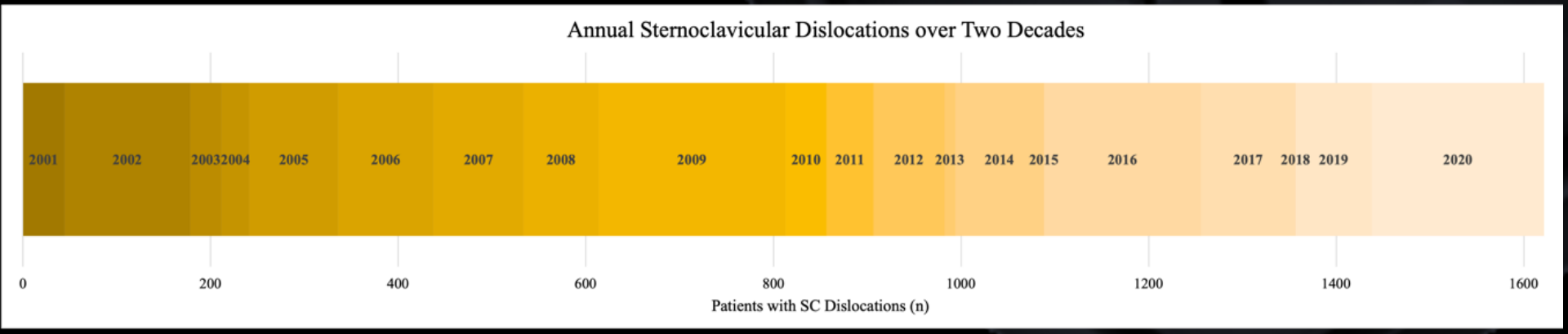
- National Electronic Injury Surveillance System (NEISS) database[5]
- Query: primary and secondary "upper trunk" and "shoulder" dislocations

Calculations: incidences based on NEISS national estimates and annual census data

RESULTS

Distribution

- Estimated 1622 injuries nationwide
- Incidence: 0.26 dislocations per 1,000,000
- 0.1% of all shoulder and upper trunk dislocations



RESULTS

Demographics

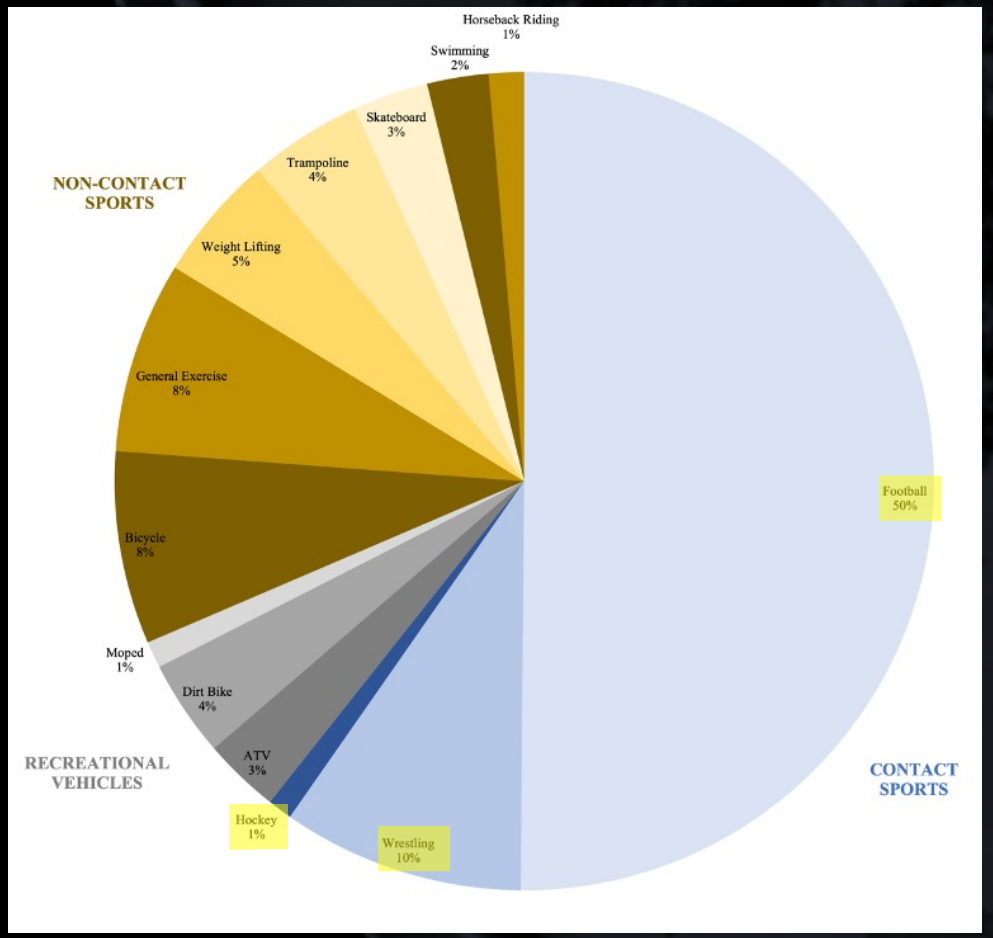
- 91% male
- 61% aged 5 – 17
- 57% occurred at places of recreation or sports
- 82% discharged directly from ED

	% (Estimated n)
Sex	
Male	91% (1480)
Female	9% (142)
Age	
<5	-
5-17	61% (982)
18-44	28% (456)
45-64	11% (184)
>65	-
Incident Locale	
Home	14% (235)
Street	3% (49)
Other public property	2% (32)
School	5% (82)
Place of recreation/sports	57% (917)
Unspecified	19% (3070
Disposition	
Released	82% (1337)
Transferred	6% (90)
Admitted	12% (194)

RESULTS

Mechanisms

- Contact sports: 63%
  - Males: 100%
  - Football: 50%
- Non-contact sports: 31%
- Recreational vehicles: 8%



RESULTS

Mechanisms

- Contact sports increased risk of admission or transfer vs discharge 1.46x (CI = 1.32 – 1.61, $p < .001$)
- Female patients
  - General exercise: n = 120
  - Horseback riding: n = 22

Sport	% (Estimated n)
Football	49% (795)
Wrestling	9% (151)
Bicycle	8% (121)
General Exercise	7% (120)
Weightlifting	5% (79)
Trampoline Use	4% (71)
Dirt Bike	4% (61)
All-Terrain Vehicle (ATV)	3% (48)
Skateboard	3% (47)
Swimming	2% (39)
Horseback Riding	1% (22)
Soccer	1% (21)
Moped	1% (17)
Gymnastics	< 1.0% (15)
Hockey	< 1.0% (15)
Total	1622

CONCLUSIONS

- SC dislocations from sports continue to be rare (0.26 per 1,000,000) and comprise only 0.1% of shoulder dislocations
- Vast majority occur in school-aged and teenage males
- Contact sports are a frequent mechanism of injury, specifically football, wrestling, and hockey
- Dislocations sustained in contact sports accrue a significantly increased risk of hospital admission or transfer

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