

ORIGINAL ARTICLE
SPORT INJURIES AND REHABILITATIONWhen celebrations go wrong: a case series
of injuries after celebrating in sports

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ABSTRACT

BACKGROUND: Athletes often engage in various celebration maneuvers during sports events. These celebrations can result in acute injuries. Our objective was to document publicized injuries in collegiate and professional athletes resulting from celebrations and examine associated variables.**METHODS:** A retrospective case series study was performed based on internet searches performed using the following major sporting news websites: espn.com, SI.com, bleacherreport.com, totalprosports.com, cbssports.com, larrybrownsposts.com, nfl.com, and mlb.com and PubMed. Keywords used during these searches included “celebration injury”, “score celebration”, and “surgery after celebration”. These same sources were used to document the sport, athlete’s age at time of injury, celebration action, type of injury, previous play, and whether surgery was required.**RESULTS:** A total of 62 athletes sustained 62 injuries resulting from various types of celebrations. All but two athletes were males, and the average age was 26.5 years old. The injuries occurred between 1993 and 2015. Sixteen (25.8%) of these injuries required surgery. Professional soccer players accounted for the greatest number of these injuries with a total of 22 injuries. One celebration in a professional soccer player resulted in a cervical spinal cord injury and subsequent death. Common celebration maneuvers included leaping into the air, pile ups, sliding, and somersaults.**CONCLUSIONS:** Serious injuries occur in a diversity of sports after celebrations. The most prevalent celebration maneuvers resulting in injuries included sliding and pile ups. The most common injuries were ACL ruptures and ankle sprains. The most serious injuries were a spinal cord injury and ankle fractures. Sixteen (25.8%) of the injuries required surgery. By encouraging athletes to temper excessive celebrations and prohibiting certain types of celebrations, many injuries may be prevented.

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Key words: Athletic injuries - Sports medicine - Prevention and control.

Athletes sustain injuries while competing in sports through a variety of mechanisms from acute contact injuries to chronic overuse injuries. However, a less described means by which athletes injure themselves is by celebrating. These celebrations are often spawned from pure joy when emotion is difficult to control, but at times these celebrations can be calculated and choreographed to help an athlete market him or herself.¹⁻¹¹

Although a tremendous amount of research has gone into studying sports related injuries and their preven-

tion, only one paper has documented post celebration injuries.¹¹ The study by Zeren *et al.* was limited to score celebration injuries in professional soccer players in Turkey during the course of two seasons. We look to expand upon this study by including a wider variety of sports and athletes competing at either the professional or collegiate rank. Celebration injuries can lead to devastating consequences for the athlete and the organization. The purpose of this study is to document publicized celebration injuries in collegiate and professional athletes across a

wide variety of sports and record the most common maneuvers, injuries, and the percentage requiring surgery.

Materials and methods

Internet searches were performed using the following major sporting news websites: espn.com, SI.com, bleacherreport.com, totalprosports.com, cbssports.com, larrybrownspots.com, nfl.com, and mlb.com. These searches were performed between 3/1/2015 and 4/1/2015. Keywords used in the sporting news website searches included the following: “celebration injury”, “score celebration”, “celebration”, and “surgery after celebration”. From the news website searches, a total of 74 results were retrieved. Fifty three of these results met inclusion criteria. Also, a PubMed search was performed. The same keywords were used in the PubMed search with the exception of “celebration.” The date the PubMed searches were performed was April 1st, 2015. A total of 81 results were obtained from this search, with only one paper meeting inclusion criteria. These same sources were used to document the sport, athlete’s age at time of injury, celebration action, type of injury, previous play, and whether surgery was required.

Two of the researchers performed the data extraction and organization (A.M. and C.R.). Inclusion criteria were any athlete, collegiate or professional, who had suffered a

musculoskeletal injury directly as a result of celebrating. Those athletes who may have sustained the injury during the actual play and not during the celebration were excluded. Also excluded were cases where insufficient documentation was available regarding the actual injury or celebration maneuver. If there was conflicting information from different sources, the case was excluded.

Results

A total of 62 athletes sustained 62 injuries resulting from various types of celebrations. All but two athletes were males, and the average age was 26.5 years old. We were unable to identify the age of two athletes at the time of injury. The injuries occurred between 1993 and 2015. Sixteen (25.8%) of these injuries required surgery. The most common injuries classified by body region were knee (24.2%), foot and ankle (22.6%), upper extremity/hand (19.4%), and head and neck (6.5%). Professional soccer players accounted for the greatest number of injuries with a total of 22. One celebration in a professional soccer player resulted in a cervical spinal cord injury and subsequent death. Table I summarizes the sport, celebration mechanism, injury, and associated variables.

With regard to American football, the most common injury was a torn anterior cruciate ligament (ACL) in six athletes, all of whom underwent ACL reconstruc-

TABLE I.—*Summary of the sport, celebration mechanism, injury, and associated variables.*

Sport	Case	Age (yrs)	Celebration action	Field type	Previous play	Injury	Surgery?
College football	1	21	Chest bump/abnormal landing	Grass	Touchdown	ACL tear	Yes
	2	21	Tackled by teammate	Grass	Touchdown	Foot sprain	No
	3	18	Chest bump/abnormal landing	Grass	Touchdown	ACL tear	Yes
	4	20	Tackled a teammate	Grass	Field goal	Elbow dislocation	No
	5	--	Hop skip/abnormal landing	Turf	Touchdown	ACL tear	Yes
	6	22	Chest bump/slipped on player’s foot	Grass	Interception	Lateral meniscus tear	No
Professional football	7	27	Hop skip	Grass	Quarterback sack	ACL tear	Yes
	8	29	Hop skip	Turf	Quarterback sack	ACL tear	Yes
	9	23	Lept in air/abnormal landing	Grass	Field goal	ACL tear	Yes
	10	26	Head butted wall	Grass	Touchdown	Neck sprain	No
	11	27	Dance/high stepping	Grass	Touchdown	Groin strain	No
	12	22	Forceful extension of shoulders/back	Grass	Tackle	Pinched shoulder nerve	No
Professional soccer	13	26	Jumping up and down	Grass	n/a	Back spasm	No
	14	23	Cartwheel/somersault	Grass	Scored goal	Cervical spinal cord injury with subsequent death	Yes
	15	19	Somersault	Grass	Scored goal	Knee sprain	No
	16	29	Fist pump	Grass	Scored goal	Arm strain	No
	17	23	Somersault	Grass	Scored goal	Ankle sprain	No
	18	29	Climbing fence	Grass	Scored goal	Amputated ring finger	Yes
	19	27	Running towards fans/Slipped, knee hits gate	Grass	Scored goal	Knee contusion	No

(To be continued)

TABLE I.—*Summary of the sport, celebration mechanism, injury, and associated variables (continues).*

Sport	Case	Age (yrs)	Celebration action	Field type	Previous play	Injury	Surgery?
Professional soccer	20	28	Running into crowd	Grass	Scored goal	Tibia/fibula fracture	Yes
	21	21	Spring/sliding	Turf	Scored goal	Hamstring tear	No
	22	--	Jumped up and hit head on roof of bench	Grass	Scored goal	Concussion	No
	23	22	Hoisted onto shoulders of another player/fall	Unknown	Scored goal	Humerus fracture	No
	24	25	Backflip	Unknown	Scored goal	Foot injury	No
	25	32	Kicked advertisement board	Unknown	Scored goal	Knee sprain	No
	26	17	Sliding	Turf	Scored goal	MCL sprain	No
	27	20	Sliding	Turf	Scored goal	Adductor muscle strain	No
	28	22	Piling up	Turf	Scored goal	Clavicle fracture	No
	29	29	Piling up	Turf	Scored goal	Rib fracture	No
	30	24	Racing away	Soil	Scored goal	Hamstring strain	No
	31	24	Piling up	Turf	Scored goal	Low back pain	No
	32	27	Sliding	Turf	Scored goal	Coccyx contusion	No
	33	28	Sliding	Turf	Scored goal	Ankle fracture	Yes
	34	27	Sliding	Turf	Scored goal	Quadriceps muscle strain	No
	35	26	Sliding	Mixed	Game won	Ankle sprain	No
College basketball	36	20	Pile up	Hardwood	Game winning play	Knee sprain	No
Professional basketball	37	27	Hugged by teammate	Hardwood	Game winning shot	Dislocated shoulder	No
	38	24	Celebratory dunk/abnormal landing	Hardwood	foul	ACL/MCL tear	Yes
College baseball	39	20	Pile up	Grass	Game winning	Wrist fracture	No
Professional baseball	40	29	Pile up	Grass	Game winning	Ankle sprain	No
	41	35	Jumping over railing from dugout	Dirt	No hitter	Knee sprain	No
	42	30	Sprinting	Grass	No hitter	Hamstring strain	No
	43	25	Jumped/abnormal landing	Dirt	Walk off home run	Meniscus tear	Yes
	44	32	Home run trot	Dirt	Home run	Hamstring strain	No
	45	26	Home plate stomp	Dirt	Walk off grand slam	Ankle fracture	Yes
	46	27	Jumping	Dirt	Walk off home run	Ankle sprain	No
	47	31	Jumping over dugout railing	Grass	Game winning play	Toe fracture/nail injury	No
	48	28	Jumping	Dirt	Walk off home run	Calf strain	No
	49	33	Jumping	Dirt	No hitter	Ankle sprain	No
	50	28	Pile up	Grass	Game winning play	Ankle sprain	No
	51	32	Pile up	Grass	Game winning out	Finger nail injury	No
	52	24	Pile up	Grass	Division clinched	Rib fracture	No
	53	31	High fiving	Dirt	--	Thumb sprain	No
	54	40	Home run trot	Dirt	Home run	Achilles tear	Yes
	55	34	Slap on side of helmet from another player	Cement	Run scored	Neck spasm	No
Professional golf	56	42	Jumping into lake	Water/rocky surface	Winning golf tournament	Ankle fracture	Yes
Professional hockey	57	22	Group hug	Ice	Goal	Shoulder sprain	No
Professional rugby	58	29	Head butt teammate	N/A	Game winning field goal	Head laceration	No
	59	26	Head butt teammate	N/A	Game winning field goal	Supraorbital laceration	No
Cricket	60	35	High five hit him in eye	N/A	Wicket	Eye injury	No
Auto racing	61	30	Broke champagne bottle	N/A	Race win	Hand laceration	No
Skiing	62	24	Broke champagne bottle	N/A	Race win	Thumb tendon laceration	Yes

Pile up: an accumulation of several athletes on top of each other generally on the ground.

Cartwheel: a movement characterized by a sideways handspring with the arms and legs extended.

Hop skip: a movement in which the athlete performs a hybrid motion of a hop and a skip in a forward lunging motion

Home run trot: refers to the slow run of a baseball player after he hits a home run while circling the bases.

Home plate stomp: a forceful step onto home plate by a baseball player after hitting a home run, either done with one or both feet.

MCL sprain: medial collateral ligament injury (MCL) in which the MCL stretches and often tears beyond what physiologic motion would allow.

tion surgery. The most common mechanism involved celebrating with some variation of a jump and subsequent abnormal landing on the injured extremity. Interestingly, cases 7 and 8 were almost identical celebration maneuvers, both resulting in ACL ruptures. Football athletes injured themselves after celebrating various types of plays including quarterback sacks, field goals, touchdowns, an interception, and a tackle.

In professional soccer, all celebrations occurred after scoring goals. A total of 22 soccer injuries were documented as resulting from a celebration. Four of these injuries required surgery. Common celebration mechanisms resulting in injury included somersaults, sliding, and pile ups. One player who performed a somersault landed abnormally resulting in a cervical spinal cord injury. The athlete underwent surgery and subsequently died within a week due to his injury.

There were a large number of publicized injuries in baseball after celebrations, but only three required surgery. All but three of the celebrations occurred after game winning plays, with the other three occurring after a run was scored or a homerun achieved. The most common mechanisms included pile ups and gatherings at home plate after a player scored a game winning play. Of the four ankle sprains resulting from celebrations, all involved some type of pile up or jumping action.

Other variables investigated included if the game was a high stakes game, defined as a game that resulted in an altered outcome with regard to the post season. However, no correlation was seen with high stakes games and celebration injuries. Recovery times after injuries were difficult to obtain and thus not examined.

Basketball, golf, hockey, cricket, rugby, auto racing, and skiing had few publicized injuries following celebrations. A forceful hug in basketball resulted in a dislocated shoulder while a forceful hug in hockey resulted in a shoulder sprain. Celebrations with a champagne bottle resulted in hand lacerations in skiing and auto racing.

Discussion

Although athletic injuries have been well studied,^{1,2,7-9} descriptions of injuries sustained by athletes during celebrations have not been well documented. We sought to describe injuries and their associated celebrations in major publicized sports and examine relevant variables.

The only previous documentation of post celebration

injuries involved professional soccer players in Turkey.¹¹ Nine cases were described in total, all occurring after goals were scored. Most injuries occurred from sliding or piling up. Injuries included muscle strains, a clavicle fracture, a rib fracture, an ankle fracture, and back injuries, with only one athlete requiring surgery. However, there has been no documentation of injuries after celebrations in other sports.

Interestingly, certain celebration injuries resulted from similar types of celebration maneuvers. In football, all of the ACL ruptures resulted from jumping into the air with a subsequent abnormal landing. The only other sport with a publicized celebration injury resulting in an ACL rupture was basketball. In baseball, an ankle sprain was the most common celebration injury. Two of the ankle sprains occurred during pile ups while the other two occurred after jumping during celebrations. Celebrations when a player attempted to reach grounds outside the boundaries of the normal sporting field tended to result in more serious injuries. Three soccer players attempted to reach the crowd. One of these players sustained a tibia and fibula fracture after a barrier collapsed while another player caught his finger in the fence when climbing it and the celebration resulted in a partial amputation of the ring finger. In golf, a player jumped into the lake after winning the tournament, but fractured his ankle. Celebrations resulting in hand lacerations both involved opening champagne bottles after winning a racing sport.

Emotion appears to play a large part in these celebration injuries. In baseball, 13 of the 17 injuries were from celebrations after a game winning play or completion of a no-hitter. In football, the most common previous play was a touchdown. In soccer, all celebrations occurred after scoring goals. Players may become uninhibited and less cautious during their celebrations due to the euphoria experienced after the previous plays. This emotional state leaves the athletes in a vulnerable and injury prone position.

Economic costs

Injuries often result in loss of playing time due to length of recovery. Athletes already carry a significant risk of injury through involvement in competitive sports,^{2,7} and it is important that they not subject themselves to greater risks with excessive celebrations. Furthermore, sporting injuries can pose a significant financial burden for the athlete and society.³⁻⁵ In a cohort

study of high school athletes, it was estimated that the mean medical cost was \$10,432 per injury in comprehensive costs (human capital costs plus lost quality of life).⁴ The most common injury among football players after a celebration was an ACL rupture. A recent study estimated the mean lifetime cost to society for a patient undergoing ACL reconstruction was \$38,121.⁵

Prevention

Physicians should be cognizant of potential injuries resulting from celebrations. Most of these injuries are preventable. Team physicians, athletic trainers, and coaches should educate athletes about the potential consequences of exuberant celebrations and encourage athletes to temper their celebrations. Moreover, the side-line physician should maintain focus not only during game play but also after, especially after a game altering play.

In addition to medical staff helping reduce the incidence of post celebration injuries, sports governing committees can help dissuade athletes from partaking in excessive celebrations. The National Collegiate Athletic Association (NCAA) currently prohibits excessive celebration in college football, defined as “any delayed, excessive, prolonged or choreographed act by which a player (or players) attempts to focus attention upon himself (or themselves)”.⁶ The National Football League (NFL) currently bans dunking the football on goal posts.¹⁰ Tighter regulations may help decrease the incidence of post celebration injuries. Focusing on prohibiting certain types of celebrations, such as pile ups and somersaults, may prove most feasible and effective.

Limitations of the study

This study is not without limitations. It is a retrospective study that is limited to information reported by major sporting news websites. Such news sources focus on high profile athletes at the college and professional levels, and thus many other athletes who may have suffered celebration injuries were likely excluded. Furthermore, most of the athletes who suffered injuries were males. It is difficult to formulate any conclusions about

female athletes and injuries after celebrations. Finally, because public sources were used, more detailed information about the injuries, such as surgery specifics and recovery time, was unavailable.

Conclusions

Serious injuries occur in a diversity of sports after celebrations. The most prevalent celebration maneuvers resulting in injuries included sliding and pile ups. The most common injuries were ACL ruptures and ankle sprains. The most serious injuries were a spinal cord injury and ankle fractures. Sixteen (25.8%) of the injuries required surgery. By encouraging athletes to temper excessive celebrations and prohibiting certain types of celebrations, many injuries may be prevented. Future prospective studies are needed to further document and study injuries occurring after celebrations in various sports.

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