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Head games

Increasing number of concussions a growing concern in high school athletics

By Andrew Carroll Sports Writer

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TUSCALOOSA | Woozy, vomiting and “going crazy” to get back in the football game, Whit Wright was about the only person not to know something wasn’t quite right.

On Oct. 19 against Hueytown, the Hillcrest High School senior quarterback took a hard shot to the head on the Patriots’ first offensive possession — resulting in the first of two concussions this year that both ended his season early and eliminated any chance of playing football in college.

“They said I acted up,” he said. “I was going crazy because I couldn’t get back in the game. I was going nuts because I couldn’t play.”

Wright isn’t alone. Published reports say that high school athletes sustain 5,000 concussions for every one on the professional level — and even the advances in helmet technology and other protective equipment, and the increased amount of certified athletic trainers on site for practices and games can do only so much to protect athletes.

Dr. James Robinson, medical director for DCH Sports Medicine, said a concussion, in simplest terms, is a brain injury.

“If you stood up and hit your head on a cabinet door in your own kitchen and saw stars, technically you’ve had a concussion, although a very mild one,” Robinson said. “It’s a minor traumatic brain injury.”

Robinson said most people, high school athletes included, recover from concussions, which have different degrees of severity and symptoms.

The two most common concussion symptoms are confusion and amnesia. The amnesia, which may or may not be preceded by a loss of consciousness, almost always involves the loss of memory of the impact that caused the concussion. Other immediate signs and symptoms of a concussion may include: headache, dizziness, ringing in the ears, nausea or vomiting and slurred speech. Some symptoms of concussions — like mood and cognitive disturbances, sensitivity to light and noise and sleep disturbances — don’t appear until hours or days later.

Robinson said concussions like Wright’s and thousands of others are graded on a three-point scale — with Grade 1 concussions being minor (resulting in symptoms lasting 15 minutes or less) and accounting for 90 percent of diagnosed concussions, Grade 2 (symptoms last more than 15 minutes, but without loss of consciousness) and Grade 3 (where a loss of consciousness exists and more serious brain injury is apparent).



STAFF GRAPHIC | ANTHONY BRATINA

There is a heightened awareness about concussions because coaches know more about it along with parents and players," Robinson said. "You have more certified athletic trainers who are trained to recognize the symptoms."

The training, Robinson said, leads to more cases of concussions being confirmed and documented.

"The biggest thing when they're unconscious is that you don't know if they have a neck or spinal injury," Robinson said. "You treat it like that until proven otherwise."

"Without having a CAT scan, if you see a guy wobbling you know it's at least a mild concussion. Most concussions follow a classic pattern involving headaches and dizziness, nausea, trouble sleeping or concentrating and irritability."

Robinson explained that the brain is floating in fluid inside the skull. If an athlete gets hit on the left side of his head, the injury or trauma could occur on the left side. He said that a "counter-coup" injury occurs when the blow on one side forces the brain to impact the opposite side of the skull. Concussions can occur through the rotation forces of acceleration and deceleration, sort of like a whiplash effect.

Robinson said a player's ability to return to action depends on his symptoms.

"I won't let them go back until they're symptom-free for several days," he said. "When Whit got knocked out [against Hueytown], he showed pretty significant concussion symptoms."

How it feels

The son of Hillcrest High School coach Johnny Wright, Whit Wright suffered his second concussion in a Class 6A playoff game against Gadsden City on Nov. 9.

"Probably the best times of my life were playing high school football," said Whit Wright, a quarterback and defensive back. "It was a fun run."

Whit Wright's latest concussion caused a delay of about two weeks before he was released to make the transition to basketball. Now he's manning a guard position for Hillcrest varsity coach Scott Suttles.

"I think about it," Whit Wright said of the possibility of another concussion. "But I know that in a game it's the last thing on my mind. I'm still going to dive on the floor. That's just the way I play. I'm going to do that. I don't think I'm it's going to change. I'm hard-headed, I guess."

Johnny Wright said that in 30 years of coaching he's had only three players get knocked out in a game. It happened to his son twice in one season.

"He's such a competitor that he wants to be in there," Johnny Wright said. "They say if you sprain an ankle it's easier to sprain it again. It's easier to get a concussion after you've had one. Whit's bad to throw his in there to try to get that extra yard. The last time he took a knee to the head."

Being "hard-headed," or determined, is an admirable trait in a high school athlete, but it won't prevent concussions. Nor will wearing a football helmet.

"They've done a lot with helmets to try to prevent it," Johnny Wright said. "But if you get hit the right way, it can still cause a concussion. We're so blessed now to have trainers and doctors looking for this sort of thing."

After the Hueytown game, Whit Wright was held out of contact work during practice. But he was cleared to play against Northridge on Oct. 26 because he wasn't showing any symptoms.

"It involves any altered neurological function due to trauma to the head," Robinson said. "It doesn't imply damage to the neurological functions, just an interruption of the normal pathways."

Against Hueytown, Whit Wright sustained a concussion during the Patriots' first offensive series.

"I didn't remember anything that next day or even where I was," he said. "They said they asked me who our principal was. I said the name of my old principal at Dora.

"My dad brought the film home and then I started remembering."

Whit Wright said he thought he lost consciousness for about 50 seconds.

"On the film, I dropped back to pass but didn't throw it," he said. "I tried to dive into the end zone. I went head-on with two defenders. As I was going down another guy hit me."

Whit Wright was examined on the field by Dr. Robinson and by Tim Brister, a certified athletic trainer assigned to Hillcrest High School through DCH Sports Medicine.

Even with his son and starting quarterback on the sideline, Johnny Wright still had a game to coach.

"When a player is unconscious, you have to be careful," Johnny Wright said. "As a coach and a father, I have a responsibility to my son and to the players. Dr. Robinson is one of the finest in his field. With him there and with our trainers, I knew Whit would be taken care of. We have Tim out there at every practice. He knows what he's doing. We emphasize to the kids that if something's wrong to let us know."

Whit Wright said he wanted to get back in the game, but the assistant coaches hid his helmet. Then he started vomiting, an indication of the severity of the concussion.

"I threw up four times," Whit Wright said. "Then they told me I had to go to the hospital."

Johnny Wright said he noticed that his son's behavior was out of character.

"He doesn't normally act that way," Johnny Wright said. "I was concerned about him because he was real agitated. He wanted to go back in the game. He has faith in what I tell him, but in that case his mind's not telling him that he's sick.

"It was tough, but fortunately he's got a real good mama [Shelia]. It scared her, but I knew she was going to take care of Whit. She's his biggest supporter."

Whit Wright was taken by ambulance to DCH Regional Medical Center, where he underwent additional tests. He said the medical personnel woke him up about every two hours to check his condition.

"My mom said I was acting up in there, just yelling and not acting myself," he said. "My dad got there after the game."

Whit Wright said he was released around 4 a.m. on Saturday.

"On Saturday, Sunday and Monday I was kind of out of it," he said. "My headaches stopped on Tuesday."

Johnny Wright said he wasn't going to let his son return to action until he had permission from a doctor. During the following week, Whit Wright continued to be examined to determine if there were lingering symptoms.

He underwent a visual test and a memorization test and ran through agility drills. Then he played on offense and defense against Northridge.

"I feel blessed because Whit is a good person," Johnny Wright said. "He's got a great personality, and he cares about other people. I say that not just because he's my son.

"Everybody growing up wants to be an All-American football player. We never looked at it that way just because I was in coaching. As you get older, you just appreciate the fact that he's a good person."

Whit Wright got his second concussion during the fourth quarter of the game in Gadsden.

"I dropped back to pass, but then I started running and met three guys," he said. "They drove me into the ground and kind of piled up on me."

Whit Wright was taken to a Gadsden hospital for a CAT scan and X-rays.

"It was better because I was calm and everything," he said. "I was out of it a little bit, but I wasn't as hyperactive."

Whit Wright wasn't a five-star recruit, but he admitted that he would have wanted a chance to play college football. He had an MRI done after his second concussion, and he and his father had a consultation with Dr. Robinson.

"He [Robinson] said he didn't like everything he saw," Whit Wright said. "I remember him saying that he didn't want to take any chances.

"The last game I ever played football I got knocked out. I guess that's something I'll always remember. It probably ended my football career."

Robinson said he has recommended that players give up football because of concussions.

"I do it all the time, every year," he said. "The thing you worry about is nobody knows how many concussions are too many. The biggest problem you hear about with pro athletes is that they continued to have symptoms and still went and played."

Whit Wright said that Hillcrest administrators advised his teachers to monitor his condition.

"The teachers were watching me," he said. "They let me go to the nurse for headaches if I needed to."

Prevention

An article posted on the American College of Sports Medicine Web site offers guidelines for team physicians treating concussions.

The article stated that "concussions cannot be completely prevented. It is essential that the team physician understand:

— Helmet use decreases the incidence of skull fracture and major head trauma, but does not prevent, and may actually increase, the incidence of concussion.

— Improper use of the head and improper fit of helmet or protective equipment may increase the risk of concussion.

— There are rules to limit concussion (e.g., spearing, head-to-head contact, leading with the head)."

Tracy Dunn, head football coach at Holt High School, said DCH Sports Medicine provides a certified athletic trainer available for every practice and every game.

"Any time you're dealing with the head it's a scary situation," Dunn said. "We try to teach them that when they're tackling to keep their heads out of it. The rules are more strict about spearing and those type of things.

"We give players and parents a release form they have to sign. Hopefully, it limits you from liability issues, but it lets them know that injuries can occur. We care an awful lot about our kids or we wouldn't be in it. We try to take every precaution we possibly can.

"I try to do the best I can to monitor those kinds of situations. We feel very fortunate that DCH provides a trainer for all our practices and all our games. What he says goes regarding those injuries.

"If you get a bump on your arm, that's one thing you've got to work through. If your head's not feeling right, you need to get it checked with the athletic trainer."

Dunn said his team had "three or four" concussions during the 2006 season. He pointed out that quarterbacks, in particular, appear more vulnerable because of their throwing motion. Even if the blow is not helmet to helmet, a hit on a quarterback can cause his head to slam off the turf.

"Sometimes it's impossible for a quarterback to get his hands down," Dunn said. "We talk to them the best we can about keeping self-protected. The equipment is a lot better. The different helmets are supposed to do a better job of limiting the severity of head injuries.

"It can happen a thousand different ways. I do feel like they're being reported more, and the players are a lot faster and stronger than they were in the past. I don't know if there are any more now, but they are being diagnosed more often. In the past, we always said you got your bell rung. That was the terminology. Nothing was diagnosed, but I was told just had my bell rung plenty of times."

Dunn said he and his coaches and the training staff monitor the players to make sure they're healthy enough to play football, and he wants his players going full speed.

"There are things you can do to take every precaution," he said. "We try to keep their necks strengthened. We try to teach proper techniques in order to minimize concussions.

"We weigh the players before and after practices. We make sure they're not losing too much weight. Dehydration makes you weaker, and when you're not playing at full speed that's when injuries do happen."

Melvin Pete, head football coach at Central High School, said he endured a couple of concussions when he was in high school, but he didn't have any when he was a quarterback at Jackson State.

Pete recently directed the Falcons to a 15-0 record and the Class 4A championship. He said that when it comes to concussions, he follows a rule of thumb.

"If you're in doubt, you always hold out," he said. "Things are a whole lot better nowadays. We're not in the caveman ages. We're doing a whole lot better with studies and things like that. Just in case things happen we know the process of what we need to go through if a person gets a neck injury or anything else."

In dealing with head injuries or possible concussions, Pete relies on the expertise of a certified athletic trainer from DCH Sports Medicine.

"I'm so happy that we have them," Pete said. "A lot of states and a lot of places don't really have

trainers.”

Pete said he tries to monitor a player if there’s a chance he might have a concussion.

“We try to gauge their awareness and notice the telltale signs,” he said. “My trainers usually make the call. A lot of times a kid tells you he wants to play. A lot of times I disappoint them.”

Pete said that in one game a player who was supposed to be sitting out with a possible concussion put himself back in the lineup.

“You turn to do something else and you’re looking for the guy that backs him up and he’s out there,” Pete said. “He ran back in the game basically on his own. Some kids just want to be in the game, but you’re talking about something that’s very serious.”

Treatment

If a Northridge High School football player gets injured, Mary T. Long is ready to respond. Long is a certified athletic trainer who is assigned to Northridge through DCH Sports Medicine.

Long said that if a player is unconscious, the first priority is to check for a spinal cord injury, which poses its own set of problems.

“It’s very imperative that you have someone trained to quickly assess that situation,” Long said.

Long said there are procedures she follows to determine the severity and treatment of a concussion. If it’s a mild concussion, there’s a chance a player could return to the game. However, Long said that a player with a concussion is susceptible to what she called “second impact phenomenon,” in which a second contact increases the damage caused by the first concussion.

“It doesn’t have to be a hard hit,” she said. “A player could just stumble over a pile and bump his head, but there’s enough pressure that it completes the rupture of a vessel that bleeds rapidly. If there’s a small leak or injury, the second hit kind of polishes it off.”

“Bleeding on the brain, in my opinion, is one of the worst things that can happen if you’re hit hard enough. With a slow bleed, a player might be acting goofy for five or 10 minutes and then they crash on you. If you have a deep vessel that ruptures, there’s nothing much you can do. You try to recognize that and get them to a trauma center.”

In treating a concussion patient, Long said she looks for signs of a lingering headache, the inability to concentrate, memory loss and mood swings.

“That’s a sure sign right there that there are disturbances in the brain,” she said. “If it’s a mild concussion, he may remember it. If he gets pretty hard and he’s out for a while, he might never remember the actual incident.”

In communicating with a patient, Long says she asks specific questions and tries to find out if his speech is slurred.

“We might ask what they had to eat for lunch or what the score is right now or what position do you play and what play were you running,” she said. “You make sure someone is standing right beside you who knows what they supposed to be doing and can tell you if he’s right or not.”

Long also said she checks for a “glazed look” in the eyes and determines if the pupils are dilated or whether they react to light.

“Some pupils are naturally larger than the other, but you get to know that when these kids have

their preseason physicals," she said. "If the pupil is dilated, something is going on or there may be bleeding in the brain that's not allowing the muscle to constrict. A bright light in the eye should cause the pupil to constrict. It's a protective mechanism not to allow too much light in the eye too quickly."

If the patient is on his feet, she checks his balance and ability to walk.

"If they're having problems maintaining their balance, you know there's an issue in their head," she said. "You're looking for the ability to self-orientate and maintain their own stability."

Long said she allows patients to have water but only in small sips.

"Sometimes after a head injury they begin to get nauseated," she said. "If that happens, we're sending them to the doctor."

Long said she relies on coaches and teammates to help her monitor a player who returns to action after what has been termed a mild concussion.

"I've seen them released by a physician in only a matter of minutes," she said. "Sometimes I take just a little longer to make sure. You have that time called a lucid interval where everything seems fine, but all of a sudden he starts getting worse. He's missing his tackles or his blocks or not hitting the hole he's supposed to hit. He may be starting to have some levels of confusion.

"You have to be a teammate with the coach. I'll tell another player about it. I'll say, 'Is John missing?' If he says, 'Yes, ma'am,' then I'm getting him out of the game."

Long said she puts players through a physical test to see if they can return to action. A player might not participate in full contact work during the week leading up to a game, but he has to perform pushups and situps and sprints under Long's supervision.

"Until they can pass the functional test, they're out," Long said. "If a physician clears him and he's functioning clearly, he's good to go, but we're still watching. I'd rather be a little bit conservative than to risk a child's life. When I'm out there taking care of those kids, it's just like they're my own children."

Not just football

Although football players are most susceptible to concussions, they aren't the only athletes prone to brain injury.

"You can get a concussion in any sport from any blow to the head," Robinson said.

The examples he cited included a baseball or softball runner colliding with a catcher at the plate or a gymnast falling from an apparatus and hitting her head. In other words, concussions happen to boys and girls all the same.

Arthur Howington coaches the girls varsity soccer team and serves as soccer coordinator for Holy Spirit Catholic High School. He said his own daughter, Jennifer Crombie, sustained a concussion while playing for the varsity as a seventh-grader.

"It's something that we try to be very aware of," Howington said. "It's a major concern that we have, at least on our team. We watch it all the time. Any time any kid has a collision involving their head, whether it's with the ground or the ball or another player, we check them that day and the next day. If they have the classic symptoms, they don't play.

"We've been very sensitive to it. It happens in girls sports. It can happen within normal practice activities."

Howington recalled that one of his players got hit in the face with a soccer ball that was kicked from 8 to 10 yards away.

"She played the rest of the half, and when she came off at halftime she wanted to go back on," Howington said. "But then she said, 'Coach, can I just sit here a little bit longer?' That was unusual for this kid. We ran the standard kinds of tests to see if she was OK, and she wasn't. Clearly she had a concussion. Her symptoms didn't show up until halftime."

Howington said in another instance a player got a concussion during practice.

"We had a kid going up for a header, and the keeper came out to try to punch the ball away," Howington said. "She actually hit the person in the head at the same time this girl hit the ball. When she came down, she had a little headache. That's one of the first things you look for."

"I sat her out. Then I sent her to the doctor. Sure enough, she had a little bit of a concussion. There was no blood on the field or anything like that, nothing major. She didn't even fall down. She just got knocked in the head and was walking around saying that it hurt. That was it. She ends up going to the doctor because I made her go. A few years ago that never would have been reported as a concussion. There's no doubt we do a much better job with it now."

Howington said his daughter's concussion occurred during a game. She took an elbow to the back of the head.

"There was nothing vicious about it, nothing done on purpose," he said. "She got hit while she was in the air."

"All three of these were very different. All these girls went to the doctor and stayed out. Basically it was just rest for whatever period of time was prescribed. I don't think anybody stayed out longer than a week. They were able to come back continued to play and play hard."

Howington said at one time there was a movement to have soccer players wear protective headgear, but it didn't catch on.

"The only pads they make us wear are shin guards," he said. "I had a kid ask me once about the most important quality a soccer player had to have. I thought about it a minute and said, 'Courage.' When you start playing with fear is when you get hurt. When you're not playing aggressively and not playing dynamically, you're more likely to get hurt. I tell them to play as hard as they can. That's the best way to protect themselves against injury."

Tuscaloosa County High School softball coach Alan Reach said he hasn't had to deal with a concussion in his coaching career, but he admitted that he's been lucky.

Reach said his main concern is a pitcher being struck in the head with a batted ball. In high school the pitching rubber is 40 feet from the plate. In college the distance is 43 feet.

"By the time a high school pitcher gets through her windup and motion she's probably less than 35 feet away from the hitter," Reach said. "That's dangerous."

Reach said one of his pitchers, junior Allison Rice, started wearing headgear in the field after seeing a summer league teammate get hit with a batted ball. "That girl had to go to the hospital," Reach said.

In high school softball, a runner is not supposed to make contact with the catcher.

"They police that pretty well," Reach said.

Reach, who is trained in CPR, said a certified athletic trainer attends every TCHS game. And when

the Lady Wildcats play on their home field, a fire department station is nearby.

"I don't have a child, but it scares me when the third baseman moves up close to the plate," Reach said. "That makes you nervous."

"I want animals on defense. I want that third baseman up there close. If you're ready to play on every pitch, you're probably going to make the play. If you're not prepared, if you take a bad at-bat out in the field with you, you're probably not going to make the play. We teach our kids to win on the next pitch. If they're ready and in tune with the game, they're going to be safe."

"We try to instill confidence there and give them the correct fundamentals to play a good brand of ball, a safe brand of ball."

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