Concussions: Head injuries are manageable, if treated properly

By ERIC THOMAS, The Patriot-News

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Alex Apostolides looks up at the man sitting across the table from him.

Tucked inside a small conference room, Apostolides, a 13-year-old junior high student at Winchester-Thurston in Pittsburgh, tells the man he’s ready to play sports again.

Dr. Mickey Collins, a renowned concussion specialist at the University of Pittsburgh Medical Center, doesn’t agree. Alex and his mother, Paulette, are visiting because he was checked hard during a hockey game and has since shown all the common signs of a concussion.

Collins asks Alex to stand and do a series of balance exercises. The teen cannot maintain his balance as he crosses his arms. His left foot keeps lifting up and he has trouble putting one foot in front of the other during the exercise.

Paulette sits and watches her son, taking deep breaths, a concerned look on her face.
As Collins continues to discuss the situation with the two, he shows Alex his test results. Quickly he realizes he is nowhere near returning to the ice for a while. Collins again asks him how ready he is to play after relaying all the information.

“Hmmm . . . about 65 percent,” Alex says.

Collins has a simple message for Alex and every patient he sees during his workday. You will get better and you will play again, as long as things are managed properly.

That’s the key to anyone who suffers a concussion, according to Collins.

“This is a manageable injury,” he says. “I hear the perception out there is that this is the boogeyman and there will be problems long term for everyone that has a concussion. I completely disagree with that.”

What makes the work so perplexing for doctors such as Collins and Dr. Harry Bramley from the Hershey Medical Center’s job is the way the brain works.

“The brain is different,” Collins says. “It’s the most complex origin in the solar system. It’s an extraordinarily complex thing. We know that different biomechanics and different types of injuries will produce different symptoms, and different symptoms will occur in every case. Everyone is different in how they respond to this. That being said, we’re starting to figure out patterns, we’re starting to figure out how this thing should act.

“Different biomechanics produce different symptoms and different symptoms predict different outcomes. When we say no two concussions are alike, it’s absolutely correct. You can never manage this injury with a cookbook, and that’s where a lot of mistakes are made. ‘Oh, sit out a week, you’ll be OK.’”

For every Alex Apostolides who walks into Collins’ office, there’s a Jennifer Steele, who makes the trip down from Erie.

Steele, who is training for a potential career in MMA (mixed martial arts), suffered three concussions in a span of three months and never did a thing about them until the day she got to UPMC.

Steele appears glass-eyed, tired, somewhat irritable and very confused. Anyone would be if they went through the daily routine Steele does.

Playing indoor soccer she suffered her first concussion after hitting her head on the floor. No. 2 came a few weeks later when a ball struck her in the side of the head. A third came after being struck in the back of the head.

To top things off, she works in a day-care center at the gym where she trains. The screaming she hears is an occupational hazard, but they’re complicated by bouts of headaches and dizziness. Night’s no better, her sleep often interrupted by restlessness. As a result her school work has suffered.

Worse yet, she is more at risk for continued serious injuries because she didn’t address the first one immediately.

“If we had managed that first concussion [Alex] and got her healthy, nothing bad would have happened to her,” Collins says. “She would have been able to take that second blow and not have any ill effects.”

Steele puts more pressure on herself than Apostolides does during the talk with Collins. She is determined to keep working her 40 hours at the day care; she is even more determined to keep playing soccer and to keep training for her MMA future.
She seems almost unwillingly to really go through all the testing and revisit the clinic, but knowing she has to, she sits in the exact spot as Apostolides and tries as best she can to focus on Collins’ directions.

**THE TOUGHEST PART**
Collins and Bramley have both been put on the spot by athletes and coaches.

No one wants to hear they are going to miss a significant chunk of time, but it is the job of both doctors and others like them to do what they feel is best for the patient. That doesn’t always mean telling them what they want to hear.

“I’ve never been in a situation here I’ve felt like . . . never once in my career have I ever felt any pressure to bend my athletes through this,” Collins says. “Every single case I see has to meet very specific criteria for them to go back to play. I think that’s a misconception. I work with some of the highest profile athletes, correct, but everyone is looking out for the best interest of their players.”

Collins says he sometimes will feel more pressure from the high school-level coaches than college or pro. And he has seen plenty of high-profile clients. In his office alone is a framed Clinton Portis jersey. Tim Tebow traveled up to UPMC after his concussion last season to visit with Collins. All over the UPMC building are framed jerseys from the likes of Mario Lemieux, Christian Ronaldo, Jim Kelly, and Olympic gold medalist and Pittsburgh native Kurt Angle. The Pittsburgh Steelers work out right next door to Collins’ office. Penguins star Sidney Crosby took his team physical at UPMC.

But often the more vexing cases are the ones such as Apostolides and Steele. First of all, there’s no one answer to the question of how long a young answer should be sidelined.

“Sit out the rest of your career because you had a concussion. Or you have to sit out eight weeks because you had a concussion . . . . To me, that’s as inappropriate as sitting out a week. Every case has got to be managed individually,” Collins says.

It’s also important for the doctor to make sure that athletes such as Steele realize the risk they’re dealing with. She says after the meeting with Collins that she doesn’t “feel 100 percent myself anymore. I don’t remember who I was before. This has affected everything.”

Collins says: “Those two cases were a pretty good juxtaposition of this injury. That first kid is going to get better very rapidly. But what you have to understand is that kid was her after her first injury. Because she wasn’t managed [the damage] ended up being much more significant.”

**MAKING AN IMPACT**
Collins’ mentor, Mark Lovell, was the creator of the ImPACT test, which is now the gold standard for concussion testing.

It took 15 years of research to get to the point Collins and Lovell are at now. It might take another five to get to the next step, whatever that is. Right now Collins and Bramley and others swear by the ImPACT test as a definitive gauge of where patients are.

“I learn something every day,” Collins says. “That treatment stuff is only three or four years old. Every day we learn something new and we apply it and that’s how you get to the point. Talk to me five years from now and I will probably evolve tenfold to where I am today. That’s the exciting part.”

What Collins and others have noticed more often via testing is that young athletes take longer to recover and can become more prone to subsequent concussions. Part of it depends on how the initial concussion is managed, but there are other areas of note.

“We looked at high school kids vs. college athletes and when you measure their outcome on
ImPACT, the high school kids take longer to recover,” he says. “We did a second study where we looked at high school athletes vs. NFL athletes and we found out high school kids take longer to recover. We know that kids do have a longer time recovering from this injury and their outcomes seem more complicated, more protracted and more difficult.”

Collins says that neck strength can play a role; indeed, Bramley says he encourages young athletes to strengthen their neck muscles during workouts. Bramley also notes that there might be some genetic predisposition that leads to potential concussions in young athletes.

In order to return to play, Collins suggest that athletes must be symptom-free at rest, symptom-free during cognitive physical activity and have “normal” test data with ImPACT.

“What we do here in Pittsburgh is so much more comprehensive,’ Collins says. “I think there’s a misconception that we just look at an ImPACT and say, ‘yeah, go back and play.’ It’s such a small part of what we do. It’s actually a very difficult test. It’s a tremendous amount of research. Years and years of knowledge have gone into developing that test.

“We realized a long time ago, how can you manage something you can’t measure? We soon realize the only way you can measure the brain is by putting it to work.”

EDUCATING THE MASSES
Bramley has a very busy summer coming up.

He and Dr. Matthew Silvis, who both work out of the Hershey Medical Center, will make the rounds as summer training camps open and preach the importance of concussions to local high schools, club teams and other athletes around the area.

It’s all part of an ongoing push to further educate athletes about the seriousness and risk of concussions.

But the real focus is geared toward local athletic trainers, who aren’t part of the win-loss equation.

“I think that the schools want their coaches there to be more aware and to have a better understanding as to what concussions are,” Bramley says. “A coach and an athlete, they’re trying to win, so having a health-care provider on the sideline to do what’s right makes a lot of sense.”

One thing in their favor is that the media attention has increased, almost commercializing the injury itself. Collins treated Heisman winner Tim Tebow shortly after his concussion and will be featured in an ESPN piece next month.

“I am struck and really pleasantly surprised at how the vision of this injury has increased,” he says. “We have an opportunity now to really drive home the education of the injury and make effective change.”

Not all the attention on concussions, however, has been good, he adds. It’s an injury that has in some ways been sensationalized because of its potential long-term effects on an athlete. In truth, many recover and go back to playing and living without consequence because the concussion was managed promptly and correctly. That often gets overshadowed.

“We’ve gone from no one understands the injury to [a focus on its] catastrophic outcomes,” he says. The truth is inbetween, and it’s about the management part that gets short shrift. That’s the thing that gives me a little bit of pause.”