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PRESS RELEASE

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FOR IMMEDIATE RELEASE

Femoral acetabular impingement, hook of hamate injuries on rise in NASCAR pit crews

*Research study findings presented by
Drs. Glenn Gaston, Walter Beaver at NASCAR Summit*

CONCORD, N.C. (January 23, 2017) – Two notable injuries are on the rise among NASCAR pit crews, according to OrthoCarolina surgeons Dr. Glenn Gaston and Dr. Walter Beaver, who presented the research findings at the 2017 NASCAR Summit in Concord on January 10. Femoral acetabular impingement injuries have increased among rear tire changers, and hook of hamate fractures have increased among changers and carriers. The studies, overseen by OrthoCarolina Director of Motorsports Bill Heisel, tracked both injuries over a number of years after records indicated higher incidences of both during the 2016 NASCAR season.

Femoral Acetabular Impingement in Rear Changers

Femoral acetabular impingement (FAI) occurs when the head of the femur does not have full range of motion within the hip socket, according to Dr. Walter Beaver of the OrthoCarolina Hip and Knee Center, who also serves as head team physician for Hendrick Motorsports. FAI typically presents with symptoms including groin pain, thigh pain and decreased range of motion, and can be either a genetic condition or acquired through injury or trauma. An epidemiological study showed that over the past seven years, 14 out of 80 total Sprint Cup Series NASCAR rear tire changers have been clinically diagnosed with FAI. All were diagnosed using plane X-rays as the diagnosis mechanism.

“Rear changers are “chasing” the car coming into the pit, and flexing and internally rotating while weight bearing in the beginning of changing the tire,” said Dr. Beaver. “After changing the right side, they post coming into extension and internally rotate and push off to get to the opposite side. In comparison; front tire changers are waiting on the car on the right side before the car stops.”

Hook of Hamate Fractures in Changers and Carriers

Of 118 upper extremity injuries tracked over a 10 year period, five among changers were hook of hamate fractures (a 7% incidence rate) as were three among carriers (a 12% incidence rate), with two more cases since the study concluded. Dr. Glenn Gaston, Chief Hand Surgeon with the OrthoCarolina Hand Center and Hand Consultant to many NASCAR teams led the research and

says that hook of hamate fractures (a bone in the palm on the small finger side of the wrist) are relatively rare in the general population. These fractures can be easily missed or overlooked as they often feel similar to a bruise or strain and don't always show up on X-ray. This small bone is in a precarious position in the wrist as the ulnar artery, ulnar nerve and the carpal tunnel run adjacent to it. The mechanism of injury is typically from the impact of blunt force to the hand.

"In NASCAR we generally see hook of hamate injuries that occur from a direct blow to the palm," said Dr. Gaston. "For pit crew members this can happen when carriers are placing tires on the car or when changers are adjusting the gun."

OrthoCarolina has previously tracked upper extremity injury trends in NASCAR drivers and pit crew through epidemiological studies including the general impact of musculoskeletal forces on the bodies of motorsports athletes. Orthopedic injuries in NASCAR vary between positions and can be linked to the demands of each role. Despite the fact that NASCAR is one of the most popular in the United States, averaging 5.8 million viewers per race, injury trends in NASCAR have not been closely studied until recent years.

"The specific forces associated with each position in racing can cause distinctive injuries," said Heisel, who oversees the OrthoCarolina Motorsports program. "When we better understand the position-associated risks and forces, we can implement preventative measures to help teams determine a course of care and when to return their athletes to the race."

OrthoCarolina Motorsports provides care in team race shops during the week and trackside at races during the NASCAR season, including management of chronic, acute and major injuries, athletic training and physical therapy services, and specialist and primary care referrals. In its entirety the service line oversees medical care for NASCAR pit crews, drivers, team employees and officials as well as many of their family members. OrthoCarolina Motorsports has formal relationships with Joe Gibbs Racing, Hendrick Motorsports, Stewart-Haas Racing, Roush Fenway Racing and Richard Petty Motorsports.

About OrthoCarolina

With expert physicians and care providers in locations throughout our region, OrthoCarolina is one of the nation's leading orthopedic practices and your destination for comprehensive orthopedic care. Our expertise in the areas of foot and ankle, hand, hip and knee, shoulder and elbow, spine, sports medicine and pediatrics to offer a continuum of care unmatched in our region — and throughout the country.

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