

PONY

VOLUME 6, ISSUE 2

Morgan Stanley Children's Hospital of NewYork-Presbyterian/Columbia University Medical Center

Female Athletes Prone to ACL Injury

By **Christopher S. Ahmad, MD**, Director of Center for Pediatric and Adolescent Sports Medicine

INSIDE THIS ISSUE

Female Athletes Prone to ACL Injury	1
Pediatric and Adolescent Sports Medicine Center Opens	1
Silent and Severe Scoliosis	2
Trip to Nanjing	2
Grateful Patients Give Back	2
Meet Christopher Ahmad, MD	3
Meet our Staff <i>Nurse Practitioners Allow Specialists to be Specialists</i>	3
Thoracic Insufficiency Seminar	4

Female athletes are 2 to 8 times more likely to injure the anterior cruciate ligament (ACL) than male athletes, according to a study published in the *American Journal of Sports Medicine*, authored by Christopher S. Ahmad, MD, Director of the newly opened **Center for Pediatric and Adolescent Sports Medicine**. (Vol. 34, No. 3, March 2006, pages 370-4). With more girls competing in basketball, gymnastics, volleyball and soccer - sports requiring maneuvers such as jumping and landing, or quick stops and turns - more cases are being seen. Dr. Ahmad explains, "Studying this problem may give insight into injury prevention that could really have impact."



The ACL lies inside the knee joint, and works to stabilize the knee and limit its rotational movement to prevent the tibia from slipping forward. If the knee receives a high level of force that could occur during a slip and fall, sudden change in direction, landing off balance, or hyperextension, the ligament may not be able to absorb the stress and a tear may result, allowing the knee to momentarily slip out of place.

Why the gender difference? One of the reasons confirmed in this study was that women tend to increase quadriceps strength more than hamstrings strength. With very strong quadriceps overpowering the

CONTINUED ON P. 3

Pediatric and Adolescent Sports Medicine Center Opens

Opening Day at the **Center for Pediatric and Adolescent Sports Medicine** brings cheers from young athletes in the tri-state area. Children and teens who have an injury or condition affecting their activity, sports performance, or ability to exercise will join our team of expert doctors, nurses, physical therapists and trainers. This special team approach to care works best with kids as they feel in control of their care.

Sports Medicine directed to growing bodies is unlike adult care. Injuries to bones, muscles, ligaments, tendons and joints are often quite different from conditions seen with older patients. Pediatric techniques require modifications to avoid any growth disturbance. The orthopaedic surgeons at our Center have the expertise, experience and qualifications to treat this unique population. Call **212-305-4565** to schedule an appointment.

Silent and Severe Scoliosis



CHONY doctors diagnose and cure Chelsea's paraplegia.

Chelsea was so pleased that her young body started growing tall because she really wanted to play basketball. At 14, Chelsea had grown to 5 foot 6 inches. “Ever since Chelsea was 13 or 14 years old, she started getting pains in her legs,” explained Clark, her father. “We just thought it was growing pains because she was stretching up so quickly.”

It became worrisome when Chelsea started losing sensation in her legs and her balance was slightly off. Chelsea's pediatrician detected a slight curvature of her spine – or scoliosis. Most patients with scoliosis do not require treatment. But with adolescents, monitoring is necessary as there is still a lot of growing to occur. Chelsea's next growth spurt took everyone by surprise.

At the end of the summer, the family was flying home from vacation when Chelsea lost total sensation in her legs. She couldn't walk off the plane. She had lost all feeling or mobility. Her parents rushed her to a hospital where Chelsea was diagnosed with paraplegia. Unable to handle Chelsea's case, the hospital discharged her in a wheelchair.

Chelsea's parents immediately sought expert attention at the Morgan Stanley Children's Hospital of NewYork-Presbyterian where David P. Roye, Jr., MD, Chief of Pediatric Orthopaedic

Surgery and Richard C.E. Anderson, MD, pediatric neurosurgeon quickly teamed up to examine Chelsea. They discovered that the paraplegia was being caused by her scoliosis. The curvature had not only advanced quickly, but the bone was pushing against her spinal cord. “She had no sensation in her legs,” described Dr. Roye. “The point at which the bone was pressing on Chelsea's spinal cord was very high on the spine, and could have been devastating if they had elected to not have the procedure.”

Dr. Roye explained that Chelsea's compromised spinal cord was sensitive to decreases in oxygen pressure and that the lower pressure of oxygen in the airplane resulted in loss of spinal cord function.

Dr. Roye and Dr. Anderson performed Chelsea's complex 10-hour surgery to remove the bone pressing on the spinal cord. After Dr. Anderson completed the removal of the vertebral body Dr. Roye corrected the scoliosis by putting in rods and screws. Her parents described surgery day as “very long, but we were not nervous because we felt we had the best.”

Chelsea's relief was immediate, recovering motor function and sensation in the recovery room. She was up and walking right away, and home after four days. With physical therapy in the home and trips to a rehabilitation center, Chelsea's recovery was quick. One month after surgery, she was back at school and making high honors. While basketball could be in Chelsea's future, this teenager has decided that she wants to learn how to play golf.

Trip to Nanjing

Orthopaedic surgeons Joshua Hyman, MD and David P. Roye, Jr., MD lead a surgical team of 26 volunteers to the city of Nanjing in the Jiangsu province of China. Organized by the Children of China Pediatrics Foundation (CCPF), over fifty disabled children

from surrounding orphanages received care during the team's one-week visit. Dr. Hyman also developed a weeklong curriculum for Chinese doctors and nurses that included demonstrations and instruction on the latest surgical and recovery room techniques.

~ Grateful Patients Give Back ~



Grateful for the care their daughter has received through 15 surgeries in her 16 years of life, the Rifkinds hosted a fundraising party that raised over \$12,000 for research.

L. to R. Hosts Deborah and Steven Rifkind, Dr. Michael Vitale, Dr. David P. Roye, Jr. and Risa Rifkind.



Mia Farrow joined other parents who gathered at the Belle Haven Country Club in Greenwich, CT to support Pediatric Orthopaedic Research and share their own experiences.

L. to R. Dr. David P. Roye, Jr., Mia Farrow, and Janis Jones, host for the evening.

Meet

Christopher Ahmad, MD



Christopher S. Ahmad, MD joins the Pediatric Orthopaedic team as Director of the Center for Pediatric and Adolescent Sports Medicine. His personal focus is on concerns of throwing athletes – shoulders, elbows and knees, and he has received awards for improving elbow surgery in baseball pitchers.

Dr. Ahmad received his medical education at NYU, completed both internship and residency at Columbia University New York Orthopaedic Hospital and finished two fellowships: Orthopaedic Research at Columbia

Orthopaedic Research Laboratory, and Orthopaedic Surgery Sports Medicine at the Kerlan-Jobe Orthopaedic Clinic in Los Angeles where he was trained in “Tommy John” surgery. Pursuing his love for the game, Dr. Ahmad has served as team physician for professional teams and is currently team physician for a college and high school.

A prolific writer and researcher, Dr. Ahmad has numerous published papers, presents his findings at national conferences, and is active in teaching surgical techniques nationally and internationally. He joins our team as Assistant Professor of Orthopedic Surgery at Columbia University P&S, and Assistant Attending of Orthopedic Surgery at NY-Presbyterian Hospital and Palisades Medical Center.

Meet our Staff

Nurse Practitioners Allow Specialists to be Specialists



When patients are seeking the attention of a pediatric orthopaedic surgeon, more often than not, they are in the operating room - doing what they do so well. For that reason, expert care is available from Linda Waters, PNP, a Pediatric Nurse Practitioner dedicated to the care of children’s musculoskeletal problems.

Ms. Waters describes her role as the liaison between referring physicians and the five surgeons in the department. Also specialty trained in pediatric orthopaedics, Ms. Waters interacts with each and every patient – inpatient and outpatient - so she is knowledgeable about each case. If the surgeon is not available, Ms. Waters is ready to answer any question. Ms. Waters works with referring offices to ensure a smooth transition; she provides pre-operative counseling to families;

and presents thorough patient education for discharge instructions and follow-up – including paperwork for schools documenting medical necessity and IEP compliance. Instructing nervous or anxious parents about the treatment and care for their child is a special talent. Ms. Waters enjoys her patient interactions, and for some with multiple disorders, she has seen them grow from one week of life to running off to school.

While Nurse Practitioners are not new to the private practice setting, hospitals are still exploring their benefits. Ms. Waters takes pride in developing the role of the PNP in her department when she started seven years ago. “We only had one doctor then,” describes Ms. Waters. “Today we are seeing an explosion of use – in ICU’s, all specialty areas, Radiology, and visiting nurses.” Ms. Waters is an instructor of other PNPs in the medical center and supervises the clinical team of medical assistants in the department.

Female Athletes Prone to ACL Injury (CONTINUED FROM P. 1)

hamstrings, an imbalance occurs leading to undue stress on the ACL.

Another reason for the gender difference is that as women become skeletally mature earlier during puberty; they tend to perform their sports activities in a more upright position. With upright posture, and quad dominance the imbalance will not decrease.

With a focus on prevention, Dr. Ahmad describes two factors to address with female athletes:

1. Make the individual more aware of their upright position during specific tasks such as landing from a jump and

cutting, and train them to modify their position to a more flexed position.

2. Preferentially strengthen their hamstrings and also their hip and core muscles to manage the less upright position, and the imbalance.

Further study is scheduled that will include a strengthening program in a community soccer league. The hypothesis is that with training methods, the quad ham ratio can be changed, and injury avoided.

For a copy of the article, call 201-305-5475.

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• **Thoracic Insufficiency Seminar – November 11**

Hear a discussion about thoracic insufficiency, a problem in lung function that results from abnormalities in the spine or rib cage in young children. Orthopaedic surgeons Michael Vitale, MD, MPH, David P. Roye, Jr., MD and pulmonary medicine experts will present indications, results and research as well as the "Vertical Rib" or VEPTR device, which has emerged as a powerful surgical treatment option for these children.

Location: Morgan Stanley Children's Hospital of NY-Presbyterian. *Call:* **212-305-5475**.

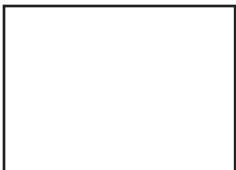
• **Pediatric Orthopedics for the Primary Care Provider - November 18**

Dr. Michael Vitale, the Division of Pediatric Orthopedics and NewYork Presbyterian Hospital will host a CME course on Pediatric Orthopedics for the Primary Care Provider at the Marriott Marquis in midtown Manhattan.

Serving the Tri-State area, call : 212-305-4565 for an appointment in any of our locations.

- New York** ▶ *Manhattan*
- Morgan Stanley Children's Hospital of NY-Presbyterian, 3959 Broadway at 165th Street
 - Herbert Irving Center, 161 Fort Washington Avenue at 165th Street
 - Columbia Eastside, 16 East 60th Street (*New expanded hours*)
- Brooklyn*
- Sclafani-Vitale Orthopaedics, 9711 Third Avenue
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