

#### 411913 Role of Color Doppler Ultrasonography to Address the Treatment of Epicondylitis With Mini-Invasive Techniques

*Sorrentino F,\* Iovane A, Nicosia A, Sutera R, Midiri M, Lagalla R* Sezione di Scienze Radiologiche, Dipartimento Biotecnologie Mediche e Medicina Legale, Università Degli Studi di Palermo, Palermo, Italy

**Objective.** To assess the role of color Doppler ultrasonography (CDUS) to address the therapy of epicondylitis (EPYC) with mini-invasive techniques (steroid injection or extracorporeal shock wave therapy [ESWT]).

**Methods.** Sixty-two patients with clinical evidence of recalcitrant EPYC (34 men; mean age, 46.7 years), conservatively treated for at least 8 weeks, were submitted to high-resolution ultrasonography (HRUS) of the affected elbow to confirm clinical suspicion. Pain was assessed with a 10-cm visual analog score. Patients with HRUS evidence of EPYC were evaluated with CDUS to assess the presence of an increased vascular signal in the EPYC area. Patients with an EPYC diagnosis were shared in 2 groups, (A) with and (B) without an increased vascular signal, and then randomly in (1) steroid injection and (2) ESWT treatment subgroups. Clinical and HRUS follow-ups were performed 6 weeks later.

**Results.** At HRUS, EPYC was observed in 96.77% of patients: on the lateral epicondyle in 70% and right-sided in 63.33% of cases. An increased vascular signal at CDUS was observed in 51.61% of cases. In patients with an increased vascular signal, a clinical-sonographic improvement was observed, respectively, in 87.5% and 31.25% of cases of the A1 and A2 subgroups, while in those of the B1 and B2 subgroups, without increased an vascular signal, a clinical-sonographic improvement was observed, respectively, in 40% and 86.77% of cases.

**Conclusions.** At CDUS evaluation, an increased vascular signal in EPYC seems to be a useful criterion to address therapy with HRUS-guided steroid injection treatment.

#### 407990 Vascular Complications Following Renal Transplantation: Imaging Findings and Their Role in the Management of Vascular Complications

*Patel B,<sup>1</sup> Martinez BK,<sup>\*1</sup> Khosla A,<sup>2</sup> West D,<sup>1</sup> Wilbur A,<sup>1</sup> Garvin P<sup>3</sup>* <sup>1</sup>Radiology, University of Illinois, Chicago, IL; <sup>2</sup>Radiology, VA Medical Center, St Louis, MO; <sup>3</sup>Surgery, St Louis University, St Louis, MO

**Objective.** To highlight the vascular complications following renal transplantation and to illustrate and discuss various imaging modality findings, vascular interventions, and their role in the management of vascular complications following renal transplantation.

**Methods.** Renal transplant ultrasound, duplex and color Doppler, computed tomography, angiograms, and vascular interventions of approximately 400 transplants were retrospectively reviewed.

**Results.** Renovascular complications following renal transplantation, such as renal artery occlusion, renal artery stenosis, renal vein stenosis, renal vein thrombosis, pseudoaneurysm, and arteriovenous fistula, were illustrated with relevant imaging and vascular interventions.

**Conclusions.** Vascular complications occur in up to 10% of renal transplantations and are associated with high morbidity, mortality, and graft loss. Awareness and early detection of vascular complications are paramount for guiding appropriate management.

### Musculoskeletal Ultrasound

*Moderators: David Fessell, MD, and William Medford, RDMS*

#### 428716 Clinical Use of Ultrasound by the Orthopedic Foot and Ankle Surgeon

*Reach JS,<sup>\*1</sup> Easley M,<sup>2</sup> Nunley J<sup>2</sup>* <sup>1</sup>Orthopedic Surgery, Yale Foot and Ankle Service, Yale University School of Medicine, New Haven, CT; <sup>2</sup>Orthopedic Surgery, Duke University School of Medicine, Durham, NC

**Objective.** Ultrasound allows portable, real-time, noninvasive, rapid examinations of soft tissue structures in both the clinic and operating room settings. It was the goal of this study to prospectively evaluate the impact of surgeon-used ultrasound in an orthopedic foot and ankle practice.

**Methods.** Over a 1-month period, new patients presenting to a foot and ankle service were randomized to an ultrasound and a nonultrasound group. Clinical, diagnostic, temporal, subjective, and economic outcomes were compared between these groups.

**Results.** Sixty-four patients were evaluated. An average of 4:19 minutes was spent with patients in the ultrasound group. Overall time to diagnosis was decreased for patients suffering peroneal split tears, posterior tibial tendonopathy,