Foot & Ankle fractures management: we need a 360° patient-centered approach

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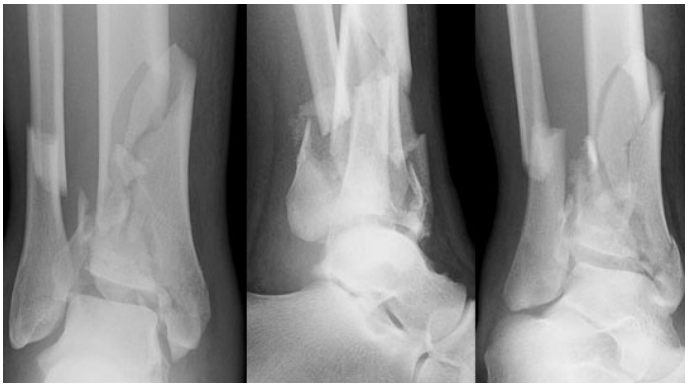
Care of foot and ankle fractures and deformities has advanced significantly in the last few decades.

New surgical procedures, new tools, promising discoveries in biology and biomechanics, and novel therapies have achieved the extraordinary goal of speeding up healing time and accelerating the patient's return to normal life.

The figures are still shocking. In the US more than 260,000 ankle fractures occur every year, accounting for almost 10% of all fractures, with **30 open fractures for every 100,000 people**.

In addition, **if the patient is diabetic (type 2) and obese, fracture and deformity management becomes even more complicated**, and developing a treatment strategy becomes more challenging and tricky.

These were only some of the topics faced by a leading international faculty of experts during the 4-day course on foot and ankle trauma and elective surgery, held from November 18 to 21 in Verona at ICLO Anatomical Laboratories and the Orthofix headquarters. The aims of the course were to provide a group of more than 50 clinicians with evidence-based best treatment solutions, while demonstrating and trying out new surgical procedures and devices.



Pilon fractures involve the weight-bearing surface of the ankle joint and often the fibula too. They may be caused by low-energy falls or high-energy impacts – falls from heights, motor vehicle accidents, and sport trauma – and they can be surgically managed in many different and valid ways, either with internal or external fixation, or a combination of the two.

Nicola Tartaglia is an Italian expert orthopaedic and trauma surgeon from F. Miulli Hospital in Acquaviva delle Fonti, Bari. Regarding ankle fracture treatment, he is a strong supporter **of external fixation**: *"Ex fix is a minimally invasive technique, as it requires minimal excision and all the **metal is removed in a few months** without the need for a second surgery.. In our experience it reduces soft tissue problems, post-operative complications and healing time. Moreover, it is a simple and reliable method, with a low rate of complications."*

Michael A. Campbell comes from Virginia Beach, USA. He is a consultant orthopaedic surgeon from Atlantic Orthopaedic Specialists in Virginia Beach. As an expert, he strongly believes in the *"importance of a good diagnosis and a proper patient assessment."* On the treatment of hindfoot and calcaneal fractures, he affirmed: *"I like to use different fixation methods according to the type of fracture and the type of patient I have to manage."*

Juan M. Rios Ruh is from Barcelona, Spain. As an orthopaedic surgeon, he coordinates the foot and ankle reconstruction department at the Hospital Moises Broggi: *"**Diabetes mellitus is the pandemic of the 21st century.** A diabetic patient with Charcot foot presents a potentially risky combination of soft tissue, bone, vascular, and nerve issues. For better outcomes we should always consider a multidisciplinary approach. A specialized team, made up not only of expert orthopaedic surgeons but also of plastic and vascular surgeons, endocrinologists, neurologists, microbiologists, radiologists, and specialized nurses. For an early diagnosis we should take into account the absence of foot pulse as a red flag together with the result of an **AIC test (hemoglobin that influences the infection rate).**"*

Alexander Cherkashin is the director of the Division of Clinical Implementation and Outcomes studies for the Center of Excellence in Limb Lengthening and Reconstruction at the Texas Scottish Rite Hospital for Children in Dallas, Texas, USA. He started his career in Kurgan, Russia, having the unique opportunity to work with **G. Ilizarov**. *"Today, **surgeons can correct the pathology with hexapod techniques**, giving them the chance to reduce and stabilize fractures, or perform complex deformity corrections. The positive result for the patient is earlier weight-bearing."*

Hemant Sharma is an honorary professor from the Hull and East Yorkshire Hospitals NHS Trust in Hull, England, and an expert orthopaedic surgeon. As the Faculty chairman, he reminded the attendees that *"the hexapod and computer-assisted circular fixator can work effectively in case of **fracture stabilization and acute deformity correction**. It can also be applied for off-loading in the acute phase of Charcot foot, or in **gradual correction of many complex deformities**. I consider it a versatile and effective device. In addition, the related software can help the surgeon in the pathway of deformity corrections."* He also stressed the importance of a **patient-oriented perspective**: *"It simply means that a surgeon with robust experience should always respect the patient's will, **listen to her/his concerns**, and share all decisions regarding the treatment strategy, in order to obtain full compliance."*

During the dry and wet laboratory sessions, the cosmopolitan cohort of attendees had the opportunity to learn the value of pre-operative planning, and put the newly learned treatment techniques into practice.

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