

Embracing Evolution: A New Era in Foot and Ankle Surgery

Mandeep S Dhillon

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The field of foot and ankle surgery has undergone a remarkable transformation in the 21st century, propelled by technological advancements, innovative surgical techniques, and a deeper understanding of biomechanics. This evolution is reshaping the way foot surgeons and podiatrists worldwide approach and treat a myriad of foot and ankle conditions, leading to improved patient outcomes and enhanced quality of life. In this editorial, we explore the dynamic landscape of foot and ankle surgery, highlighting the key concepts that are driving this exciting evolution.

MINIMALLY INVASIVE TECHNIQUES

One of the most significant shifts in foot and ankle surgery is the increasing adoption of minimally invasive techniques. Traditionally, open surgeries were the norm, often resulting in prolonged recovery times and increased risk of complications. However, with the advent of advanced imaging technologies and specialized instruments, surgeons can now perform intricate procedures through smaller incisions. Minimally invasive surgery not only reduces postoperative pain and accelerates recovery but also minimizes scarring and tissue damage. The article on the new “spear plate” for MIS hallux valgus surgery published in this volume, is a case in point.

THREE-DIMENSIONAL PRINTING AND PERSONALIZED IMPLANTS

The integration of three-dimensional (3D) printing technology has revolutionized the manufacturing of implants and prosthetics in foot and ankle surgery. Surgeons can now create patient-specific implants tailored to individual anatomy, improving the fit, and functionality of the implant. This customization not only enhances surgical precision but also contributes to better long-term outcomes. Patients benefit from reduced pain, improved joint function, and a faster return to normal activities. This concept has been applied by some of the editors of this Journal in a PhD thesis to evaluate and treat talus malunions; a scoping review of the same is being published in the April issue of the JFASAP.

BIOLOGICS AND REGENERATIVE MEDICINE

The use of biologics and regenerative medicine in foot and ankle surgery is a promising frontier. These therapies harness the body's natural healing mechanisms to promote tissue repair and regeneration. From platelet-rich plasma injections to stem cell treatments, surgeons are exploring innovative ways to enhance healing and accelerate recovery. This approach not only addresses the symptoms but also targets the underlying causes of various foot and ankle conditions. The journal's Editorial Board has thought this important enough to plan a focused issue on orthobiologics in a 2024 issue.

Department of Orthopaedics, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India

Corresponding Author: Department of Orthopaedics, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India, Phone: +91 9815951090, e-mail: drdhillon@gmail.com

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NAVIGATION AND ROBOTICS

Advancements in navigation and robotics used widely in arthroplasty and spine, have also brought unprecedented precision to foot and ankle surgery. Surgeons can now utilize computer-assisted systems to plan and execute procedures with unparalleled accuracy. This technology enhances the surgeon's ability to navigate complex anatomical structures, improving the overall safety and efficacy of surgeries. Patients can experience reduced postoperative pain, quicker rehabilitation, and a higher likelihood of achieving optimal functional outcomes.

PATIENT-CENTRIC CARE AND SHARED DECISION-MAKING

The evolving concept of patient-centric care is transforming the doctor–patient relationship in foot and ankle surgery. Shared decision-making, where patients actively participate in the treatment planning process, is becoming the norm. Surgeons are placing greater emphasis on educating patients about various treatment options, potential risks, and expected outcomes. This collaborative approach ensures that the chosen treatment aligns with the patient's preferences and lifestyle, leading to increased satisfaction, and better adherence to postoperative care plans. An offshoot of this is the India-based foot/ankle outcome evaluation score being developed by the members of the Indian Foot and Ankle Society, part of which has been published in the August 2023 issue of JFASAP.

CONCLUSION

As foot and ankle surgery continues to evolve, the integration of advanced technologies and patient-centric approaches is shaping a new era of innovation and excellence. Surgeons are moving beyond traditional methodologies, embracing a holistic and personalized approach to enhance the overall patient experience. The future holds exciting possibilities for further breakthroughs, ultimately improving the lives of individuals dealing with foot and ankle conditions.