

Interventional pillars in robotics and didactics approach to imaging modalities: Radiology and robotics in 2025

Abstract

In this brief review we will discuss the automation of musculoskeletal functions in nerve signals, and motions derived from osteopathic medicine. We will then merge this knowledge with the new approach to robotics and didactics in Interventional radiology. Briefly we will discuss in this series the current and future applications of robotics into medical Imaging, and natural sciences of musculoskeletal functions. The short summary will discuss one case involving cartilage, bone, and robotic interventional radiology.

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Research methodology

1. In the applications of Medical Images we discussed that a brief summary of didactics and robotics was applied to a specimen with cartilage and bone dysfunction.
2. The orbital portion of the femur had a cartilage to bone injury, in this case we manipulated the motion, and soft tissue through invasive robotics, through didactics approach.
3. The image-guidance were analyzed and the percutaneous and musculoskeletal features were technically emphasized in the slides by the Robotics approach.
4. We then navigated through didactic tools, and using the robotic guidance system created a potential to simplify the procedure and targeted the approach to the anatomy by using Medical Images such as CT (Computed Tomography, fluoroscopy, and Ultrasound (US)).

Experimentation/implications

1. Scenario-Based results of this medical imaging series case pointed out the osteochondritis in the IR imaging- the bone fragments, and cartilage needed a robotic guided approach to separate the conjoined anomaly.
2. We proceeded to contribute to the results for further research into the bone density, size, and percutaneous imaging with the robotic and didactic efforts.
3. The diagnosis wasn't consolidated, due to intervention that is further required when working with osteopathic features and we issued a CT-Scan and X-ray.
4. Upon receiving results we completed our introductory studies with the medical imaging and IR, and used computer data science to set data points in didactic robotic guidance imaging, and STEM cell research into bone, cartilage, and anomalies, we also identified the osteochondritis and developed a new approach to musculoskeletal manipulation to separate the bone from cartilage.

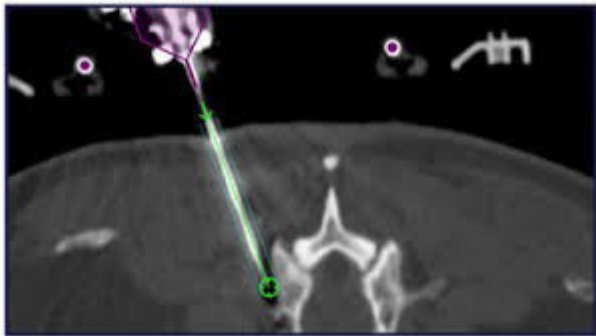


Figure 1: Example of robotic arm guided IR-Into bone/cartilage-osteochondritis approach.

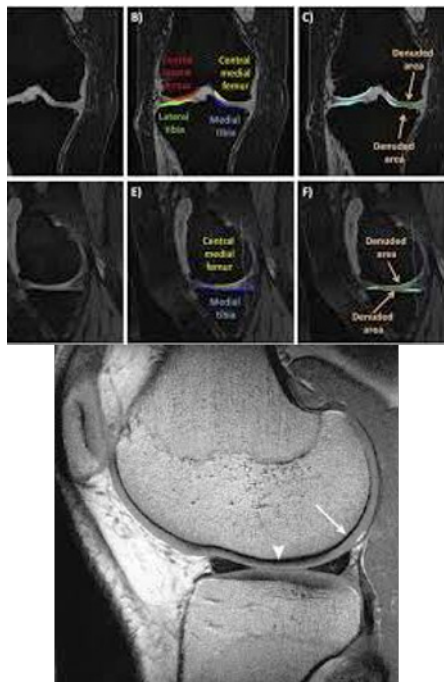


Figure 2: Examples of didactics in identification of needle guided _IR approach (Femur/Bone/Cartilage) in image above.

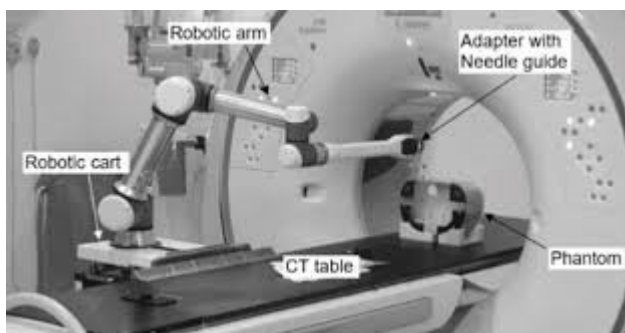


Figure 3: IR-Clinical application procedure room with compliant identification of didactics for robotic interventional imaging, and guided IR-Surgical preparation.

Conclusion

1. In this new applied approach, we remarkable proposed the case to undergo further research.
2. The cartilage and bone were remarkable separated by IR- Guided Didactics, and the Medical Images created in-formatics systems in synchronicity with our Research and Development
3. We captured several regenerative features, and specimens for further STEM Cell, and osteopathic case research, and for solutions to IR-Guided Didactic Robotics Medical Images.

Declarations

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Conflict of interests The authors declare conflict of interest in areas of North America, and Europe. Laboratory location remain soveirgn, and privately funded since 2009.

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