

TITLE: Artificial intelligence in orthopedics: The surgeon's perspective (Cross-Sectional study).

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ABSTRACT (upto 300 words)

Background: Artificial intelligence (AI) is currently integrated into many medical services. Artificial intelligence is utilized in many aspects of orthopedic surgery. The scope ranges from diagnosis to complex surgery.

Aim: To evaluate the perception, attitudes, and interests of Sudanese orthopedic surgeons regarding different applications of artificial intelligence in orthopedic surgery.

Methods: This qualitative questionnaire-based study was conducted through an anonymous electronic survey using Google Forms distributed among Sudanese orthopedic surgeons. The questionnaire entailed four sections. The first section included the participants' demographic data. The remaining three sections included questions for the assessment of the perception, attitude, and interest of surgeons toward (AI). The validity and reliability of the questionnaire were tested and piloted before the final dissemination. **Results:** One hundred twenty-nine surgeons responded to the questionnaires. Most respondents needed to be more aware about the basic concepts of artificial intelligence. However, most respondents were aware of its use in spinal and joint replacement surgeries. Most respondents had doubts regarding safety of (AI). However, they were highly interested in utilizing (AI) in many orthopedic surgical aspects.

Conclusion: The participants were mainly aware of (AI) utilization within specific surgical subspecialties, such as joint replacement and spine surgery. Nonetheless, they had insufficient knowledge of (AI) terminology. They agreed that (AI) is a revolution in orthopedic surgery that must be widely practiced and applied.



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3rd Annual Conference on ORTHOPEDICS, RHEUMATOLOGY AND MUSCULOSKELETAL DISORDERS November 27-28, 2023 | Dubai, UAE

Presenter Name: Ahmed Kamal. **Mode of Presentation:** Oral. **Contact number:** 00966536468476.



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BIOGRAPHY (upto 200 words)

Ahmed is a consultant and assistant professor of orthopedic surgery and trauma at king Faisal university - KSA with special interest in Trauma and limb reconstruction. He had an experience of 10 years as surgeon. he had a number of publications in rebuttable journal and participated as speaker in many international conferences.



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TITLE: Distal radius extra-articular fractures : The impact of anatomical alignment on patient's perceived outcome.

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ABSTRACT (upto 300 words)

Purpose :The effects of the anatomical alignment of distal radial fractures on the patient's perceived outcome is drawing much attention recently, and much controversy exists in the literature. The primary purpose of this study was to identify the effect of the radiological parameters of reduction (radial inclination, radial length, and radial tilt) on the patient's perceived functional outcome, which was quantified using the DASH questionnaire.

Methods :One hundred twenty-four patients with distal radial extraarticular fractures managed by closed reduction and casting were included in the study. Their radiological (anatomical) outcome was determined by measuring the radial inclination, tilt, and length. Subjective functional outcome was quantified using the DASH score, calculated from the Arabic translated DASH questionnaire at three months and six months after cast removal. **Results** :the mean DASH score was 31.56 SD± 9.1 at three months and 29 SD± 3.89 at six months, and the acceptable radiological results for radial tilt, radial inclination, and radial length (according to McDermid's criteria for acceptable reduction) were 77.4%, 88.7% and 74.4% respectively. There was a significant linear correlation between two radiological parameters (radial tilt and radial length) and the DASH score at 3-month follow-up, which was more profound among patients less than 70 years old and patients with diabetes mellitus. At 6-month follow-up, there was no significant relationship between the radiological parameters and the DASH score.

Conclusion :This study confirmed that radiological outcome affects the early patient-perceived outcome, with a more significant effect among patients under 70 and diabetics. Nonetheless, over time, there will be no significant relationship between the quality of reduction and patients' perceived outcomes.



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