

Proximal radius length and radial head diameter as a guide for radial head prosthesis size selection and placement. A pilot study

Ahmed Elzubier Ahmed

Homerton University Hospital NHS Foundation Trust, London, UK

Abstract

Objective

To determine if there is a relationship between proximal radial length and radial head diameter.

Design

A pilot study.

Methods

20 plain AP radiographs of the elbow were selected for this study. Two measurements were made from each x-ray. The radial head diameter (RD); distance between the widest points of the superior aspect of the radial head and the radio-tuberosity distance (RTD); distance between the most superior point of the medial radial head to the midpoint of the bicipital tuberosity of the radius. Mean RD:RTD ratios and 95% confidence intervals were calculated for all patients. Patients were also stratified into various groups based on gender and age.

Results

The mean RD:RTD ratio for all participants was 0.65 with a relatively low standard deviation of 0.04. Indicating a similar relationship between the RD and the RTD for all participants. Moreover the 95% confidence interval for the mean RD:RTD ratio was calculated as 0.63-0.67.

Conclusion

The results of this study do show an apparent relationship between proximal radial length and radial head diameter. It is hoped that further research on the topic will lead to more accurate positioning and sizing of radial head replacements leading to better patient outcomes.



Biography:

Dr Ahmed Elzubier Ahmed has completed his MBBS at Barts and the London School of Medicine and Dentistry. He then went on to complete a BSc (Hons) in Sports and Exercise Medicine at Queen Mary University of London. He is currently working as a junior doctor with Oxford University Hospitals NHS Foundation Trust with ambitions for a career in Trauma and Orthopaedics.

Speaker Publications:

1. Doctor-patient communication: A skill needed in Saudi Arabia, Journal of Family and Community Medicine 9(1):51-6.



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