

عنوان مقاله:

?Do Carpal Tunnel Hands Have Different Shape Compare to Normal Hands

محل انتشار:

مجله استخوان و جراحی عمومی، دوره 9، شماره 2 (سال: 1400)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Mohamad Sahebalam - *Orthopedic Research Center, Ghaem Hospital, Mashhad University of Medical Sciences, Mashhad, Iran*

Golnaz Ghayyem Hassankhani - *Orthopedic Research Center, Ghaem Hospital, Mashhad University of Medical Sciences, Mashhad, Iran*

Amin Azhari - *Orthopedic Research Center, Ghaem Hospital, Mashhad University of Medical Sciences, Mashhad, Iran*

Ali Moradi - *Orthopedic Research Center, Ghaem Hospital, Mashhad University of Medical Sciences, Mashhad, Iran*

خلاصه مقاله:

Background: Given the fact that the carpal tunnel syndrome (CTS) happens as a consequence of the median nerve entrapment, besides other known factors, the shape and anthropometric characteristics of the carpal tunnel, wrist, and hand could be considered as a predisposing risk factor for idiopathic CTS. The aim of this study was to evaluate the morphology and radiologic scales in CTS hands. Methods: In this prospective study, patients who underwent upper extremity electrodiagnostic studies were enrolled for hand morphologic and radiographic indexes. Patients were divided into CTS suffering and CTS symptom-free groups according to nerve conduction velocity (NCV) findings. A true posteroanterior radiograph of the hands was performed for each participant. Metacarpal length to wrist length index (carpal ratio), metacarpal length to metacarpal width index, third to first metacarpal length, hand length index, and hand volume index were measured in both groups. Results: Significant differences were seen between the two groups regarding the body mass index ($P < 0.001$), metacarpal length divided by metacarpal width index ($P = 0.008$), first metacarpal length divided by third metacarpal length ($P = 0.002$), wrist circumference divided by distal flexor wrist crease to the tip of the third finger ($P < 0.001$), distal flexor wrist crease to the tip of the third finger divided by hand volume ($P = 0.005$), and distal flexor wrist crease to the tip of the third finger divided by wrist circumference ($P < 0.001$). Multivariable analysis of hand indices were statically significant for the first metacarpal length divided by third metacarpal length ($P = 0.00$), wrist circumference divided by distal flexor wrist crease to the tip of the third finger ($P = 0.038$), and distal flexor wrist crease to the tip of the third finger divided by wrist circumference ($P = 0.017$). However, first metacarpal length divided by third metacarpal length and third metacarpal length divided by palm height were associated with higher CTS occurrences. Receiver operating characteristic curve analysis demonstrated cutoff points which were possible to estimate only for first metacarpal length divided by third metacarpal length and wrist circumference divided by distal flexor wrist crease to the tip of the third finger. Conclusion: Based on our findings, CTS hand is characterized by shorter fingers compared to thumb and wrist (metacarpal length to wrist length and hand length indexes), wider (metacarpal length to metacarpal width index), and bulkier (hand volume index) compared to ... non-CTS hands. The severity of CTS was corr

کلمات کلیدی:

Carpal tunnel syndrome, Electrodiagnostic studies, EMG- NCV, hand shape, radiological

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1198349>

