

The synovial joints of the human foot¹

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Key words: Foot, Synovial Joint, Descriptive Anatomy, Functional Anatomy, Radiological Anatomy

SUMMARY

The human foot is considered an organ with an assortment of tissues with different morphological characteristics and well defined limits, but effectively has a simple functionality when static that becomes extremely complex when in movement. Its complex structure, comprised of an elastic and resistant skin covering a bone framework, joints, muscles, tendons, veins and nerves, can be compared to an efficient mechanical assembly. After a long and extraordinary evolutive journey, the human foot has undergone numerous changes to perfect its function; it has lost most of its grabbing function whilst gaining new characteristics that have ultimately allowed the modern man to stand upright. The complex articular structure of the human foot consists of thirty four synovial joints, of which eighteen have curved surfaces and sixteen plane surfaces. Following the criteria set by the systematic, radiological and clinical anatomy, the Authors contribute further to the current knowledge on the ankle, tarsal (anatomic subtalar, transverse tarsal, cuneonavicular, intercuneiform and cuneocuboid), tarsometatarsal, intermetatarsal, metatarsophalangeal and interphalangeal joints and dorsal, plantar and interosseous ligaments of the human foot.

The articular lines of the transverse tarsal (Chopart) and tarsometatarsal (Lisfranc) joints are particularly interesting and not only from a surgical point of view; through a straightforward identification of few reference points, it is possible to find the medial and lateral extremities of the Chopart's and Lisfranc's lines, the former pinpoints the boundary between the hindfoot and midfoot and the latter between the midfoot and forefoot.

¹ This manuscript was the original opening presentation of the "Primo Congresso Nazionale di Podologia, Posturologia, Riabilitazione e Sport." held on the 28th of April 2006 in Palermo, Italy. The congress was organised by the "Cattedra di Medicina dello Sport" directed by Prof. G. Francavilla and by the "Corso di Laurea in Podologia". This work has been funded by MIUR ex 60%, Prof. Palma.