

The Nutrient Foramen of the Scaphoid Bone - A Morphological Study

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Abstract : Background: The scaphoid is the most commonly fractured bone of the wrist. The fracture may disrupt the vessels and end up as the avascular necrosis of the bone. The objective of the present study was to investigate the morphology and number of the nutrient foramina in the cadaveric dried scaphoid bones of the Indian population. Methods: The present study included 46 scaphoid bones (26 right sided and 20 left sided) which were obtained from the gross anatomy laboratory of our institution. The bones were macroscopically observed for the nutrient foramina and the data was collected with respect to their number. The tabulation of the data and analysis were done. Results: All of our specimens (100%) exhibited the nutrient foramina over the non-articular surfaces. The foramina were observed only over the palmar and dorsal surfaces of the scaphoid bones. The foramina were observed both proximal and distal to the mid waist of the scaphoid bone. The foramen ranged between 9 and 54 in each scaphoid bone. The foramina over the palmar surface ranged between, 2-24 in number. The foramina over the dorsal surface ranged between, 7-36 in number. The foramina proximal to the waist ranged between 2 and 24 in number and distal to the waist ranged between 3 and 39. Conclusion: We believe that the present study has provided additional data about the nutrient foramina of the scaphoid bones. The data is enlightening to the orthopedic surgeon and would help in the hand surgeries. The morphological knowledge of the vasculature, their foramina of entry and their number is required to understand the concepts in the avascular necrosis of the proximal scaphoid and non-union of the fracture at the waist of the scaphoid.

Keywords : avascular necrosis, nutrient, scaphoid, vascular

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