The Incidence of Agenesis of Palmaris Longus Muscle Among Multiracial Medical Students of University Malaya, Malaysia

Normadiah M Kassim¹ • Intan Suhana Zulkaflí¹ • Rasheeda Mohd Zamin¹ • Muhammad Amri Salim¹ • Mahmoud Danaee² • Siti Rosnani Md Zin³

Received: 11 July 2019 / Accepted: 6 November 2019
© Association of Surgeons of India 2019

Abstract
Palmaris longus (PL) is the most superficial flexor muscle of the wrist. Agenesis of this muscle does not result in disability but its presence plays a significant role in reconstructive plastic surgery as a donor tendon for grafting. The awareness of the incidence of PL occurrence in a population is therefore desirable. In the present study, 457 multiracial medical students (220 Malays, 198 Chinese and 39 Indians) of University of Malaya, Malaysia, ages between 18 to 22 years, were examined for the presence or absence of the PL tendon using Schaeffer’s test. This study demonstrated the overall difference in occurrence rate of PL among the multiracial students which indirectly represent its overall pattern in Malaysian population, as the students originate from various states of this country. The data collected were then analyzed using non-parametric test to determine pattern of occurrence and incidence of agenesis of this muscle with regard to ethnicity, laterality, and gender. The highest incidence of unilateral and bilateral PL agenesis was observed in Indian students despite being the smallest race among the three groups studied. This study contradicts with previous findings that concluded Malays to be the group with the highest incidence of unilateral PL agenesis. This contradiction therefore justifies the need to construct a larger cohort study, which covers more diverse ethnic groups in Malaysia including the indigenous groups in Sabah and Sarawak to obtain the true incidence rate of PL agenesis in Malaysia.

Keywords: Surgery • Anatomy • Palmaris longus • Upper limb • Tendon

Introduction
Palmaris longus (PL) is a small fusiform-shaped muscle, located at the posterior surface of the forearm, between the extensor digitorum communis and the extensor carpi radialis longus muscles. The PL tendon can serve as a donor tendon in reconstructive surgery [11]. The presence of PL can be easily determined by examination or inspection of the forearm due to its superficial location.