



RESEARCH REPORT ON

PALMARIS LONGUS AGENESIS (PLA)

AMONG MAJOR ETHNIC GROUPS OF

RURAL SABAH

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ABSTRACT

The functional role of Palmaris longus muscle is little to human upper limb, but its long tendon is very useful as a donor tendon in hand reconstructive surgery. In the human body, Palmaris longus muscle is often described as one of the most variable muscles in both number and form. It is only to be consistently found in mammals especially in those using forelimbs for weight-bearing and ambulation. The absence of Palmaris longus in human appears to be hereditary but its possibility through genetic transmission has not been proven yet. The first report in 1559 estimated the Palmaris longus agenesis (PLA) was 17.2% among Indians and 12-24% in Caucasians. It was reported to be 4.6% among Singaporean-Chinese while 12.6% and 26.6% in Nigeria-black and Turkish people respectively. A 2007 UKM study shows prevalence of PLA in Malays was 11.3% followed by Indians (10.7%) and Chinese (6.0%). Studies had indicated that PLA would be associated with other anatomical variations of hand.

Borneo is the third largest island in the world and located in the centre of the Maritime Southeast Asia. Sabah, once known as north Borneo, is the second biggest states in Malaysia after Sarawak. Sabah, the land below the wind, has over 32 ethnic groups of people who make up the multicultural state. The largest indigenous ethnic group in Sabah is Kadazan-Dusun residing mainly on the West Coast region of Sabah, making up about 30% of population. They traditionally work as paddy and vegetable planters. One famous feature of Kadazan-Dusun culture is the Harvest Festival where these people give thanks to Rice spirit for harvest. Bajau is the second largest indigenous ethnic group and they are well known as Sabah's cowboy horsemen. They live in east coast of Sabah. Murut is the third largest indigenous ethnic group in Sabah and mostly live in South West region of Sabah and remote area like the interior residency between Keningau, tenom and Pensiangan. They were great hunters, using blowpipes and poisoned darts during hunting. Some are still living in

more remote area and practicing shifting cultivation. (<http://blog.borneotropicaladventures.com/2012/11/the-diverse-ethnic-group-of-sabah/>)

Aim & Objectives:

To assess the prevalence of palmaris longus tendon nonexistence or agenesi among rural population of Sabah

To compare the palmaris longus tendon agenesi and dysgenesis conditions among different Gender and different ethnic groups of Sabah.

Methods:

The presence or absence of Palmaris longus tendon was clinically examined among the ethnic volunteers (18 years and above) by using standard tests namely Schaffer's test, Thompson's test, Mishra's test I and II, Pushpakumar's test.

Results/Findings:

28 villages from Sandakan, Kudat, Pitas, Keningau, Sandakan, Tenom, Samporna and Tawau, Kota Belud and Kota Kinabalu (Penanpang and Innanam) areas were covered. 397 Dusun (129 males & 268 females) and 201 Bajau (85 males & 116 females), 53 Murut (20 males & 33 females) were examined. Only 64.7% of Dusun and 73.6% of Bajau and 71.7% of Murut showed presence of Palmaris longus tendon in both hands. The bilateral absence of Palmaris longus tendon was 18.9% among Dusun and 11.4% among Bajau and 11.3% in Murut. PL tendon unilateral absence was 16.4% in