Abstract. The aim of this study was to assess the absence of the palmaris longus, the proportion of the lengths of tendon and muscle belly, the development of the tendon and the belly during the fetal period, look for any difference between sides and gender. Fifty-eight spontaneously aborted human fetuses (26 female, 32 male, 116 upper extremities) were studied. The presence or absence of the palmaris longus was determined. The lengths of the belly and tendon were measured, and belly/tendon length ratio was calculated. Correlation with gestational age, body side and gender were studied. The muscle was absent in 44 forearms (37.93%; 20 right side, 34.48%; 24 left side, 41.38%); being bilateral in 19 of 58 fetuses (32.76%) and unilateral in six (10.34%). The unilateral absence rate was higher on the left side with a statistically significant difference. The absence of palmaris longus was more common in females, and the difference was statistically significant. The belly/tendon length ratio was 1.04 +/- 0.35 on the right side and 1.09 +/- 0.3 on the left. It did not show any difference according the fetal age. A sound knowledge on the anatomy and variations of palmaris longus is of great importance during surgical interventions; because it is the first choice for tendon grafts, by the virtue of its structure and function. Thus, this study is of academic interest for anatomists and hand surgeons alike.