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ANATOMICAL VARIATIONS OF THE HUMAN VERMIFORM APPENDIX AS OBSERVED DURING AUTOPSIES

P. M. N. S. Ekanayake¹, A. N. Vadysinghe², P. Senasinghe³, S. B. Adikari¹

*¹Department of Anatomy, ²Department of Forensic Medicine,
Faculty of Medicine, University of Peradeniya
³Base Hospital, Nawalapitiya*

The Human vermiform appendix is a vestigial structure, which shows extreme variability in its position and morphology. Varying symptoms of acute appendicitis reflects this variability of its relationship to the surrounding structures making the clinical presentation of appendicitis highly inconsistent. The retrocaecal position of the tip of the appendix, with the base connected to the postero-medial wall of the caecum is the commonest variation. The length of the appendix usually ranges from 7.5 - 10 cm in adults. Variations of meso-appendix and appendicular artery are also common.

The objective of this study is to describe the anatomical variations of the healthy appendix in terms of morphology, position of the tip and the base, length, details of meso-appendix and appendicular artery.

A sample of dead bodies of subjects over 18 years of age that underwent medico-legal autopsy by two consultant judicial medical officers between November 2011- November 2012 at the Teaching Hospital Peradeniya and Base Hospital, Nawalapitiya, were included in the study. Putrefied bodies, and those with abdominal pathology were excluded.

The 60 subjects examined were between 19-88 years of age, with 39 males and 21 females. Mobile healthy appendices were observed in 58 of them. One case with an appendicular mass and another with absent appendix were excluded. Post-ileal appendices were found in 29 (50%) subjects, while 20 (34.5%) had retro-caecal appendices. Pelvic 7 (12%), and para-caecal 2 (3.5%) were also detected, while no pre-ileal, sub-caecal or promonteric appendices were noted. The base of the appendices were found on the postero-medial wall of the caecum in 36 (62.07%), on the lower pole of the caecum in 18 (31%) and on the postero-lateral wall in 4 (6%) subjects.

The length of the appendix varied from 3 -14 cm with a mean of 8.2 cm. The distance between the ileo-caecal valve to the base of the appendix varied from 1 - 6 cm with a mean of 2.8 cm. The distance between the edge of the meso-appendix and the tip of the appendix varied from 0 - 7 cm with the average being 1.23 cm. In 30 (51.7 %) of the subjects the meso-appendix continued to the tip of the appendix. The appendicular artery continued to the tip of the appendix in 37 (63.8%) subjects.

The human appendix shows extreme anatomical variations. The post-ileal position was the commonest. The base of the appendix was commonly situated on the postero-medial wall of the caecum. The length of the appendix varied widely. In the majority, the meso-appendix and the appendicular artery continued to the tip of the appendix.