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## Letter to Editor

# “Anatomy is not a harlot of medicine”- Joseph Hyrtl

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Dear Professor Sharma,

With great interest I read the short communication entitled “Demystifying anatomical variations- Education and clinical perspectives” by Mishra et al.<sup>1</sup>

I highly agree with the authors that the overall quality of case reports about anatomical variations must be improved in several cases. I often miss the consultation and citing of important works from researchers of the 1800s and early 1900s (e.g., Gruber W, Macalister A, Testut L, Wood J). Additionally, pure speculation about the clinical relevance of variations do not add profundity to a publication but can lead to confusion.

In his textbook from 1846, the famous Austrian anatomist Joseph Hyrtl wrote the statements: “Medicine cannot exist without anatomy, but anatomy can exist without medicine [Die Medicin kann der Anatomie nicht entbehren, obgleich die Anatomie sehr wohl ohne Medicin bestehen kann]”, and, more cynically: “Anatomy is not a harlot of medicine [Die Anatomie ist keine Magd der Heilkunde]”.<sup>2</sup>

These words are crude, nevertheless, still true today.

Besides direct clinical relevance, for example confusing surgeons during operation, the study of anatomical variations can give insight into both the ontogeny and phylogeny of humans. They are important to other subjects besides medicine, such as comparative anatomy, anthropology, or human evolutionary biology. Anatomical variations might represent an aspect of human

microevolution. For example, the prevalence of the median artery in the forearm is increasing during the 20th century.<sup>3</sup> In contrast, the prevalence of the thyroid ima artery is reduced in a South Australian population of European descent.<sup>4</sup> Several factors might influence these changes (e.g., acceleration of prenatal development, ethnic mixture, reduced selective pressure due to therapeutical intervention). Within the concept of evolutionary medicine, a better understanding of human evolution finally is leading to a refinement of medicine.<sup>3</sup>

Therefore, it is highly reasonably to publish findings about anatomical variations (e.g., previously unreported variations, coincidence of variations, prevalence studies), especially in different populations, even it seems unlikely that they are clinically important in the first place.

## 1. Conflict of Interest

None.

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