

## EDITORIAL

## THE RESEARCH VALUE OF CADAVER DISSECTION



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The research project aspect of cadaver dissection has been relatively undermined because the debate surrounding use of cadavers has focused almost exclusively on the pedagogic role of cadaver dissection in medical education (Guttmann et al., 2004). Historically, the first use of Human cadavers for anatomical research occurred in the 4<sup>th</sup> century BC when Herophilus and Erasistratus gained permission to perform human dissection on executed criminals in Alexandria. In 1543, Andreas Vesalius, the father of modern Anatomy, published a series of detailed images of dissected corpses. Subsequently, in most parts of the world, human dissection was prohibited. In England, for example, however, the murderers act of 1752 allowed for the bodies of executed murders to be dissected for Anatomical Research and Education. Today, many acts permit use of cadavers for Medical Education and Research. Indeed, Research in Gross Anatomy is mainly based on cadaver dissection (Rokade and Bahetee, 2013).

Human cadavers are also used in injury biomechanics research. They, for example, enable Biomechanical Engineers and designers to develop effective injury counter measures for motor vehicle occupants and pedestrians involved in crashes. Accordingly they provide a critical and necessary component in the continued quest to reduce crash related injuries and fatalities. Many lives are saved and injuries prevented for each cadaver used in the development and validation of safety improvements (King et al., 1995; Crandall et al., 2011).

Despite advances in technology, cadaver dissection still remains valuable in revealing anatomical detail. The most dramatic illustration of this is the recent description of detailed characteristics of anterolateral ligament of the human knee, through cadaveric dissection (Claes et al., 2013). This ligament, first postulated in 1879, had remained enigmatic. The clarity with which the ligament was demonstrated prompted the Anatomical Society to describe the research as "very refreshing. The researchers' have reminded the world that despite the emergence of advanced technology, our knowledge of the human body is not yet exhaustive".

The current issue of Anatomy Journal of Africa contains several articles based on cadaveric dissection, which continue to advocate the value of this practice in contributing knowledge to improve medical practice. The description of variant testicular arteries by Misiani et al., is invaluable during surgery in the retroperitoneal space, as it may be associated with several

other anomalies (Jyosthna et al., 2012). Quadrifurcation and pentafurcation of common carotid artery reported by Ogeng'o et al., will definitely influence approach to neck surgery (Dimov, 2013). The account by Osabutey on the celiac and testicular arteries draws attention to variations that may influence the presentation, diagnosis and management of celiac artery compression syndrome (Chou et al., 2012). Additional heads of gastrocnemius elaborated by Ashaolu et al., are important for diagnosis and management of popliteal neurovascular entrapment syndrome (Srinivasa et al., 2013).

Doctors and Anatomists are encouraged to document and report unusual observations from cadaver dissection.

"Without anatomical understanding of the human body that is afforded by dissection, much of modern medicine would simply not exist"

Joel Howell – Professor of History and Internal Medicine, University of Michigan

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