SOME THINGS IN ANATOMY DO CHANGE

Stephen W. Carmichael

*Department of Anatomy and Orthopedic Surgery, Mayo Clinic, Rochester, MN, USA*

We know that knowledge of clinical anatomy changes, mostly driven by improvements in technology (Carmichael, 2012). However, does anatomy change? Many people would say that it doesn’t, but anatomical knowledge is changing because of evidence-based studies, particularly of surface anatomy.

It has been pointed out that surface landmarks that are in current use were established by cadaveric dissection and measurements decades ago, many of them during the 19th century (Standring, 2012).

A series of articles in a Special Section on Surface Anatomy was published in 2012 and this decades-old knowledge has been significantly reappraised (Mirjalili and Stringer, 2012). These studies are based on radiographs of healthy, living people. These were mostly computed tomographic (CT) images but other imaging modalities could be used. One of the main findings is that there is more variation in the location of anatomic planes and surface projections of internal organs than previously appreciated. Also, differences based on age, sex, nutritional status (particularly obesity) and ethnicity were found. Clearly there is a need for region-specific information based on evidence obtained from healthy individuals.

Not only does clinical anatomy change based on improved technologies, but anatomic knowledge changes based on new approaches such as evidence-based studies.

**References:**


