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Need for improved continuing education in anatomy for clinicians in Norway

OPINIONS

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Clinicians in Norway deserve a far better provision of continuing education in anatomy than is currently the case.

A growing number of international educational institutions are offering clinically oriented anatomy education for doctors (clinical anatomy), mainly based on macroanatomical skills training on cadavers (1, 2).

Knowledge of anatomy is at its peak when taking the exam in this subject during medical studies. During clinical specialisation, it is mainly the structures that are relevant to the individual diagnostic and therapeutic procedures within the field that are of interest.

General knowledge of anatomy often declines into a narrow selection of the body's structures, and as the degree of specialisation increases, the problems associated with such a limited focus will be amplified. In surgery, this situation can become pronounced. Eventually, the focus is solely on the few structures that must be uncovered for adequate access. The rapid development of 'minimally invasive surgery' also entails less need for exposure.

> ***«This shift towards a sole focus on the clinically most relevant structures may seem appropriate, but entails possible problems»***

This shift towards a sole focus on the clinically most relevant structures may seem appropriate, but entails possible problems. In critical surgical situations, precise anatomical knowledge of adjacent areas is sometimes needed. Maintaining in-depth knowledge of the structures in a wider area would help ensure more holistic insights to and understandings of anatomy, physiology and pathology.

Anatomy knowledge survey

In 2014, we surveyed clinicians in Norway's views on their own knowledge of anatomy and the provision of anatomy education (3, 4) – presumably the only Norwegian survey in the field.

Of the 902 clinicians in Norway from the specialties of general medicine, internal medicine, surgery, neurology and radiology, as much as 72 % stated that they had experienced insufficient knowledge of anatomy in their own practice. The provisions for learning and maintaining anatomy knowledge and skills post-medical school were considered insufficient. As many as 36 % of the doctors reported that they were not familiar with what provision was available, and among the remainder, 74 % perceived the education provision as insufficient. In response to the 'Yes/No' question about the need for more anatomy in specialisation, surgeons, neurologists and radiologists answered affirmatively in 90–95 % of cases. Clinically oriented dissection courses are only available for a few groups (ENT doctors and neurosurgeons).

Clinical training courses vs continuing education in anatomy

We believe that these considerations about the loss of general anatomy knowledge during specialisation and the answers from the survey clearly indicate a need for the provision of open and accessible continuing education in

anatomy. We therefore call for a debate on the form and content of such courses.

> *«Courses where the objective is both the recovery of anatomy knowledge and the learning of clinical skills can also be envisaged»*

One possibility is to arrange training courses with the main emphasis on anatomy but with a clinical orientation (clinical anatomy). Courses where the objective is both the recovery of anatomy knowledge and the learning of clinical skills can also be envisaged, i.e. a combination of clinical training courses for the specialty and a refresher course in anatomy knowledge. We would argue that within surgical specialties, almost all courses would be improved with the addition of human cadaver dissection. This will have the potential to flatten the learning curve and improve patient safety.

Soft preservation

New methods for preserving cadavers should also be mentioned here. The so-called 'soft preservation' method, developed by the anatomist Walter Thiel (5), has replaced formaldehyde fixation at many universities and opened up entirely new possibilities for surgical skills training. A number of studies indicate significant benefits linked to more natural colour and elasticity, while formaldehyde-related health risks are reduced. The Thiel method makes it possible to perform laparoscopic procedures (6), which is out of the question on rigid, formaldehyde-fixed cadavers. The improved tissue elasticity also allows ventilation of the lungs, thoracoscopy, examination of the joints and arthroscopy, in addition to a better and more natural surgical 'tissue sensation'.

We believe that clinicians in Norway deserve a far better provision for continuing education in anatomy and look forward to a debate about form and content. 'Clinical anatomy' courses have recently been implemented at our institution, and our ambition is to introduce soft preservation of cadavers in Norway.

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