THESIS REVIEW

An Educational Comparison of Thin Cadaveric Sections and Magnetic Resonance Images

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Our Australian colleague Marisa Magiros submitted in November 1996 a thesis entitled "An Educational Comparison of Thin Plastinated Cadaveric Sections and Magnetic Resonance Images" (Bachelor of Medical Science, University of Sydney). We were delighted to receive a copy of her well illustrated thesis, which deserves a review in our journal.

The aims of the study are:

1. To determine which plastination technique (PEM 11, PEM 27 or E 12) will produce the most suitable specimens for student testing,
2. To show that thin plastinated cadaveric sections can be accurately correlated with Magnetic Resonance (MR) scans,
3. To determine whether cross-sectional anatomy can be learnt more effectively from a thin plastinated cadaveric section, from an MR scan or from simultaneously using a corresponding MRI and plastinated section, and
4. To evaluate students' preferences for learning anatomy.

The first chapter (pp. 1-25) summarizes the early preservation techniques, the four steps of plastination, the characteristics of the polymers used in this study (PEM 11, PEM 27, and E 12), the physics of MRI, and the main trends in anatomical pedagogics.

The second chapter (pp. 26-62) describes in detail the materials and methods: scanning of heads, preparation and plastination of specimens (only the PEM 11 and E 12 techniques were used), and the organization and statistical analysis of student testing (Test A: Dentistry 2 students, n = 47; TestB:n=15).

The third chapter (pp. 63-72) correlates plastinated sections and MRIs.

The fourth chapter (pp. 73-120) gives a detailed account of the student testing. The statistical analysis is especially rigorous and will serve as a model for all future researches on the place of plastination in anatomical pedagogics. The results of the tests are of outstanding importance: they show the benefit gained by using plastinated sections and MRIs simultaneously, and the type of plastinated sections the students prefer.

One of the most important points of the conclusion (pp. 121-123) is the place of PEM 11 plastinated sections in anatomical and radiological training. The bibliography includes 96 references, and the last fourteen pages are appendices.

To my knowledge, Ms. Magiros is the third student to choose plastination as the subject of a thesis. Her two predecessors were Mr. Poncot (France, 1993) and Ms. De La Cruz Baltazar (Canada, 1996). A fourth thesis on plastination is about to be submitted in France by Mr. Durand, probably in November 1997 (plastination in otorhinolaryngology). This trend confirms the importance of plastination in current morphological sciences and its breakthrough in radiological and surgical fields.

In conclusion, Ms. Magiros's thesis is to date the best one ever written. I firmly encourage the author to submit a summary of the fourth chapter of her thesis to our journal, so that every one may take advantage of her results and her exemplary methodology.

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du Quebec a Trois-Rivieres Canada