

## **Cranial Osteopathic Manipulative Medicine's Growing Evidence Base**

Hollis H. King, DO, PhD

wo articles on cranial osteopathic manipulative medicine (OMM)<sup>1,2</sup> were published in the December 2011 issue of JAOA—The Journal of the American Osteopathic Association, and a review of a clinical study reporting the benefits of cranial manipulation appears in the present issue's installment of "The Somatic Connection."<sup>3</sup> All of these items bring much-needed attention to the discussion on the validity of the concept and clinical benefits of cranial OMM in the practice of health care.

There is arguably as much, if not more, current research attention devoted to cranial OMM as there is to any other single OMM procedure, yet cranial procedures remain the most controversial. Despite the controversy, I believe there is mounting support for virtually all aspects of cranial OMM, including theoretical assumptions (eg, the Primary Respiratory Mechanism elements), clinical benefits, and physiologic mechanisms of action.

As one reads the systematic review by Jäkel and von Hauenschild,<sup>2</sup> it becomes apparent that a number of studies that used cranial OMM were not included because of the strict selection process used by the authors. Their inclusion criteria required that only articles that specifically described cranial manipulation be included. Hence, Jäkel and von Hauenschild have a possibly lim-

ited conclusion, as follows: "The currently available evidence on the clinical efficacy of cranial OMM is heterogeneous and insufficient to draw definitive conclusions." They further state the obvious, writing, "further research into this area is needed." This conclusion is appreciated and respected for its scientific purity, and indeed, the article is not yet another anti–cranial OMM screed—far from it. However, their review could have been more comprehensive and still maintained scientific integrity.

While the tenets of modern research would lead us to isolate the specific OMM maneuver that may produce a measurable beneficial outcome, in actual clinical practice multiple OMM maneuvers are usually employed. In any discussion of the effects of cranial OMM, I can think of at least 3 articles in which clinical benefit in the use of cranial OMM was demonstrated but specific descriptions of cranial OMM were lacking 5,6 or cranial OMM descriptions were vaguely referred to.7 While the articles by Frymann<sup>5,6</sup> may not have specified cranial OMM, anyone remotely familiar with Frymann's work knows she performed cranial OMM on every patient; during a cranial course she was directing about a decade ago, I heard her publicly state that she did. In the study by Mills et al,7 treatment included "balanced membranous tension (according to the teachings of William Garner Sutherland, DO, and others)," referring to Osteopathy in the Cranial Field by Magoun.8 Clearly, cranial OMM was used in that study.

Two articles published subsequent to the Jäkel and von Hauenschild systematic review<sup>2</sup> specify cranial OMM and report beneficial outcomes.<sup>1,9</sup> In the study by Shi et al,<sup>1</sup> cranial OMM produced measurable physiologic effects that contribute to our understanding of possible mechanisms of action for cranial OMM. In the study by Lopez et al,<sup>9</sup> spe-

cific cranial OMM procedures were described in the treatment protocol, and data showed improved balance and equilibrium in healthy elderly adults.

Jäkel and von Hauenschild<sup>2</sup> were justified in their approach, but I would like the osteopathic medical profession and the scientific community at large to know that much more research has been done that suggests benefit for the clinical application of cranial OMM. Perhaps the pieces are now in place for a fuller review and explication of cranial OMM.

## References

- Shi X, Rehrer S, Prajapati P, et al. Effect of cranial osteopathic manipulative medicine on cerebral tissue oxygenation. J Am Osteopath Assoc. 2011;111 (12):660-666.
- Jäkel A, von Hauenschild P. Therapeutic effects of cranial osteopathic manipulative medicine: a systematic review. J Am Osteopath Assoc. 2011;111(12): 685-693.
- 3. King HH. "As the twig is bent, so grows the tree": part 2 [review of Lessard 5, Gagnon I, Trottier N. Exploring the impact of osteopathic treatment on cranial asymmetries associated with nonsynostotic plagiocephaly in infants. Complement Ther Clin Pract. 2011;17(4):193-198]. J Am Osteopath Assoc. 2012;112(1):11-12.
- Zubcevik N. Cranial palpation pressures used by osteopathy students [letter]. J Am Osteopath Assoc. 2009;109(7):379-380. http://www.jaoa.org/content /109/7/379.2.full. Accessed December 29, 2011.
- Frymann V. Learning difficulties of children viewed in the light of the osteopathic concept. J Am Osteopath Assoc. 1976;76(1):46-61.
- Frymann VM, Carney RE, Springall P. Effect of osteopathic medical management on neurologic development in children. J Am Osteopath Assoc. 1992;92(6):729-744.
- Mills MV, Henley CE, Barnes LL, Carreiro JE, Degenhardt BF. The use of osteopathic manipulative treatment as adjuvant therapy in children with recurrent acute otitis media. Arch Pediatr Adolesc Med. 2003; 157(9):861-866.
- 8. Magoun Hl. Osteopathy in the Cranial Field. 3rd ed. Kirksville, MO: Journal Printing Co; 1976.
- Lopez D, King HH, Knebl JA, Kosmopoulos V, Collins D, Patterson RM. Effect of comprehensive osteopathic manipulative treatment on balance in elderly patients: a pilot study. J Am Osteopath Assoc. 2011;111(6):382-388.

Dr King is a section editor of and regular contributor to "The Somatic Connection" and is a member of the JAOA Editorial Board.

Financial Disclosures: None reported.
Address correspondence to Hollis H. King,
DO, PhD, Program Director/Director of Medical
Education, University of Wisconsin Department
of Family Medicine, Osteopathic Residency Program, 1100 Delaplaine Ct, Madison, WI 537151840.

E-mail: hollis.king@fammed.wisc.edu