Letters to the Editor

Correlation of measurement of optic nerve sheath diameter with ultrasound and magnetic resonance imaging

Sir,

The article by Shirodkar *et al*.[1] on the correlation of measurement of optic nerve sheath diameter (ONSD) measured using ultrasound and magnetic resonance imaging (MRI) was very interesting. ONSD measurement has been correlated well with raised intracranial pressure.[2] Bedside measurement of ONSD by ultrasound offers a very important advantage over other modalities and helps in early initiation of treatment.

This has been a very well done study, but we believe the study could have been improved if the following points were considered:

- The study does not tell us who has done the ultrasonographic examination. It is very important if the study shows that examination done by an intensivist is having good correlation with MRI. The experience of the person doing the ultrasonography is also important as most previous studies have been done by experienced radiologists
- The inter and inter observer variations are not noted both in the ultrasonographic and MRI examination.[3] These are important sources of error in studies where an individual's observations are taken in the calculation. Most of the studies on ONSD have used two people for performing the ultrasonography and the mean value of both the observers are taken into account.[4] It would have been better if two persons were given the task of doing ultrasonography and reporting of the MRI for the same reading
- Potgieter *et al*.[5] have shown that 4-h workshop was sufficient to teach novice ultrasonographers to learn measurement of ONSD. The study could have added some data on the training needed to do an examination.

This has been a very well done study, but the above would have helped in increasing our knowledge in the field of measurement of ONSD. It would have added to bedside management by an intensivist, the training and would have helped to establish the role of ultrasound in diagnosis, monitoring and management of raised intracerebral pressure.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Shakti Bedanta Mishra, Afzal Azim, Syed Nabeel Muzaffar

Department of Critical Care Medicine, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, Uttar Pradesh, India

Correspondence:
Dr. Shakti Bedanta Mishra,
Department of Critical Care Medicine, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Raebareli Road, Lucknow - 226 014, Uttar Pradesh, India.
E-mail: shaktimishra84@gmail.com

References

1. Shirodkar CG, Munta K, Rao SM, Mahesh MU. Correlation of measurement of optic nerve sheath diameter using ultrasound with magnetic resonance imaging. Indian J Crit Care Med 2015;19:466-70.
2. Shirodkar CG, Rao SM, Mutkule DP, Harde YR, Venkategowda PM, Mahesh MU. Optic nerve sheath diameter as a marker for evaluation and prognostication of intracranial pressure in Indian patients: An observational study. Indian J Crit Care Med 2014;18:728-34.
3. Bäuerle J, Lochner P, Kaps M, Nedelmann M. Intra- and interobsever reliability of sonographic assessment of the optic nerve sheath diameter in healthy adults. J Neuroimaging 2012;22:42-5.
4. Chin JH, Seo H, Lee EH, Lee J, Hong JH, Hwang JH, *et al*. Sonographic optic nerve sheath diameter as a surrogate measure for intracranial pressure in anesthetized patients in the Trendelenburg position. BMC Anesthesiol 2015;15:43.
5. Potgieter DW, Kippin A, Ngu F, McKean C. Can accurate ultrasonographic measurement of the optic nerve sheath diameter (a non-invasive measure of intracranial pressure) be taught to novice operators in a single training session? Anaesth Intensive Care 2011;39:95-100.

Access this article online

Quick Response Code:

Website: www.ijccm.org

DOI: 10.4103/0972-5229.167055

How to cite this article: Mishra SB, Azim A, Muzaffar SN. Correlation of measurement of optic nerve sheath diameter with ultrasound and magnetic resonance imaging. Indian J Crit Care Med 2015;19:624.