Improved sensitivity of Kernig’s and Brudzinski’s sign in diagnosing meningitis in children

Sir,
I read the article titled “Appraisal of Kernig’s and Brudzinski’s sign in meningitis” by Mehndiratta et al., with interest. It is amazing to note the kind of importance given to meticulous clinical examination and contributions of the great clinicians, at a time when no sophisticated technology or lab facilities were available. I would like to make a few important comments regarding the article.

The authors mention that Kernig’s and Brudzinski’s sign have low sensitivity and have shown references to validate their claims. However, all references about these signs in children with meningitis are more than 25 years old. In contrast, recent studies have shown better sensitivity than the old references cited by authors. A recent meta-analysis including 10 studies on clinical features suggestive of meningitis in children has revealed the sensitivity and specificity of Kernig’s sign to be 53% and 85%, respectively, and of Brudzinski’s sign to be 66% and 74%, respectively. Another study carried out on 108 children revealed that Brudzinski’s and Kernig’s signs are present in 51% and 27% of children with proven meningitis with relatively high positive predictive values of 81% and 77%, respectively.

It should be noted that diagnosis of Tuberculous meningitis in children is extremely difficult and not straightforward as in bacterial meningitis. I hope the authors would agree that those cited studies are from the days of the pre-imaging era where diagnosis was solely based on lumbar puncture alone. Now, with the advent of neuro-imaging, polymerase chain reaction, and other newer diagnostic methods for the diagnosis of TB in children, more cases are being effectively diagnosed, which can explain the increase in sensitivity in recent studies.

Timely diagnosis and treatment, which are crucial in the management of meningitis, are facilitated by the presence of Kernig’s and Brudzinski’s signs. These signs are also utilized in numerous scoring algorithms for diagnosing meningitis and also provide enough justification for proceeding with a lumbar puncture and instituting therapy.

Thirunavukkarasu Arun Babu
Department of Pediatrics,
Indira Gandhi Medical College and Research Institute,
Pondicherry, India

For correspondence:
Dr. Thirunavukkarasu Arun Babu, Department of Pediatrics,
Indira Gandhi Medical College and Research Institute,
Pondicherry - 605 009, India.
E-mail: babuarun@yahoo.com
Letters to the Editor

Migraine and restless leg syndrome co‑morbidity may be due to iron deficiency

Sir,

We inspected Gupta et al.'s study carefully. The authors investigated the effect of restless leg syndrome (RLS) on the formation of migraine‑type headache. Our opinion is that iron deficiency may have an effect on the pathophysiology of migraine seen in RLS patients. So we recommend the readers to keep in mind that iron deficiency might have an effect on migraine formation in RLS patients.

Furthermore, when we inspected Gupta et al.'s study carefully, the authors investigated the effect of RLS on the formation of migraine‑type headache. They focused on the hypothesis that the frequency and duration of RLS symptoms, sleep disturbance, and increased prevalence of depression, and positive family history, all caused by RLS, contribute in the formation of migrain‑type headache. These factors are likely to contribute to the formation of migraine, as mentioned in the study. However, it is a recognized fact that iron deficiency is seen in RLS patients. Quinn C, Uzbeck M, Saleem I, Cotter P, Ali J, O'Malley G, et al. Iron status and chronic kidney disease predict restless legs syndrome in an older hospital population. Sleep Med 2011;12:295‑301.

In the study conducted by Vuković‑Cvetković et al., has stated that iron deficiency anemia is common in patients with menstrual migraine and might have a trigger effect on migraine attacks. Vuković‑Cvetković V, Plavec D, Lovrencić‑Huzjan A, Galinović I, Serić V, Demarin V. Is iron deficiency anemia related to menstrual migraine? Post hoc analysis of an observational study evaluating clinical characteristics of patients with menstrual migraine. Acta Clin Croat 2010;49:389‑94.

In the methodology of Gupta et al.'s study, iron deficiency was not a criteria of exclusion from the study. Our opinion is that iron deficiency may have an effect on the pathophysiology of migraine seen in RLS patients. So we recommend the readers to keep in mind that iron deficiency might have an effect on migraine formation in RLS patients.

Mehmet Yücel, Hakan Akgün1, Oğuzhan Öz2, Şeref Demirkaya2
Departments of Neurology, Kasımpaşa Military Hospital, Istanbul, 1Etimesgut Military Medical Academy, Ankara, Turkey

For correspondence:
Dr. Mehmet Yucel,
Department of Neurology,
Kasımpasa Military Hospital, Yeşilköy Semt Polikliniği,
Yeşilköy Istanbul, Turkey.
E‑mail: drmehmetyucel@yahoo.com.tr

References

1. Gupta R, Lahan V, Goel D. Primary headaches in restless legs syndrome patients. Ann Indian Acad Neurol 2012;15:S104‑8.
2. Quinn C, Uzbeck M, Saleem I, Cotter P, Ali J, O'Malley G, et al. Iron status and chronic kidney disease predict restless legs syndrome in an older hospital population. Sleep Med 2011;12:295‑301.
3. Çurgunlu A, Döventaş A, Karadeniz D, Erdinçler DS, Oztürk AK, Karter Y, et al. Prevalence and characteristics of restless legs syndrome (RLS) in the elderly and the relation of serum ferritin levels with disease severity: Hospital‑based study from Istanbul, Turkey. Arch Gerontol Geriatr 2012;55:73‑6.
4. Vuković‑Cvetković V, Plavec D, Lovrencić‑Huzjan A, Galinović I, Serić V, Demarin V. Is iron deficiency anemia related to menstrual migraine? Post hoc analysis of an observational study evaluating clinical characteristics of patients with menstrual migraine. Acta Clin Croat 2010;49:389‑94.

Access this article online
Quick Response Code: Website: www.annalsofian.org
DOI: 10.4103/0972-2327.116956