Editorial

Pediatric brain abscesses

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The article on pediatric brain abscesses by Dr. Sheehan and associates is an outstanding review of the origin, presentation, evaluation, treatment, and outcome of this rare condition. A number of points bear emphasis.

1. The condition is rare, but timely discovery can be life saving. As is true of most classic presentations, the triad of fever, headache, and neurological deficit occurs in less than one half of patients. The fever is frequently low grade, and the child often does not appear toxemic. The timeworn warning about a “high index of suspicion” certainly applies.

2. Congenital heart disease remains the most common identified cause of brain abscess in children. A heart murmur heard on auscultation can aid in making the diagnosis.

3. The major change in the origins of brain abscess is the increased number of patients with immune suppression. These children frequently have fungal infections, and a fungal brain abscess is difficult to cure. These abscesses warrant the most aggressive surgical management and antibiotic use. Unfortunately, many immunocompromised children with brain abscesses have, as noted by the authors, severe systemic infections.

4. The imaging modality of choice is MR imaging. Diffusion weighted images can be used to differentiate between abscess and tumor, with abscesses having a high-intensity signal due to a reduced diffusion coefficient.

5. The use of glucocorticosteroids in pharmacological doses may lead to a rapid improvement in headache, level of consciousness, and neurological deficit. Concern about the use of steroids in an infected patient does not apply to an isolated abscess with a well-defined capsule apparent on imaging. Steroids have been shown to delay capsule formation during conversion of cerebritis to abscess, so they should not be used in a patient with imaging findings consistent with cerebritis.

6. The role of surgery in the treatment of abscess remains controversial. As the authors suggest, stereotactically guided aspiration can lead to rapid improvement and aids in the identification of the causative microorganism or organisms.

7. Many abscesses contain multiple organisms. For this reason, broad-spectrum coverage should be started empirically. Even after positive cultures, broad-spectrum coverage should be continued because cultures may miss fastidious organisms.

8. The role of foreign bodies in persistent infection should be emphasized. If a foreign body is present, it should be removed.

The authors are to be congratulated on their excellent review.

RESPONSE: Dr. Raffel’s editorial highlights the major points of our review and further stresses the need for the high index of clinical suspicion required to make this diagnosis. We thank him for his kind comments.

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