

While it is true that "early surgical intervention does not guarantee the prevention of serious ocular sequela" it is equally true that surgical drainage of subperiosteal abscess can prevent progression to blindness. Considering the difficulties inherent in performing frequent quality ophthalmologic examinations of young children with orbital inflammation and the risk of permanent ocular sequelae vs the risk of surgery, I will continue to drain all collections of orbital pus when diagnosed by CT or other means.

Sincerely,

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Reference

- 1 Harris, G.J., Subperiosteal abscess of the orbit, *Arch. Ophthalmol.*, 101 (1983) 751-757.

Reply

Dear Sir,

Dr. Scott Manning raises several interesting issues in his discussion of our suggested management of subperiosteal abscess of the orbit in children, Dr. Manning's point that accurate assessment of visual acuity may be difficult in young children with swollen, tender eyes is well taken. Our successful non-surgical management of subperiosteal abscess has depended upon the ability to perform careful, serial ocular examination on all patients. In patients in whom compliance has been an issue, we have recommended surgical drainage whenever clinical or radiographic evidence has suggested the presence of an abscess. Nonetheless, in our experience, a significant number of patients have been compliant to serial ocular exam, have improved with medical therapy alone, and thus have been spared unnecessary surgery.

Dr. Manning contends that strong arguments exist for draining any orbital abscess diagnosed by CT scan. This approach relies upon an accurate radiographic diagnosis determined by CT scan. When a CT scan shows a large abscess collection of subperiosteal pus with air-fluid collection, few surgeons would resist the urge to drain it. However, as stated in the manuscript, the ability of CT to differentiate abscess from phlegmon is not well established, particularly when an air-fluid level is not present. The wide availability of CT scanners in the general community has understandably lead to an earlier radiographic diagnosis of SPA than was previously possible, and has also likely lead to earlier surgical intervention in many of these

cases. Before the advent of widespread CT scanning, many such cases would have been diagnosed and successfully treated as periorbital cellulitis. It has been, and still is, our contention that the successful non-surgical management of SPA is dependent on an earlier diagnosis and treatment than was previously possible before the advent of high resolution CT scanners. However, we acknowledge that many successfully treated 'abscesses' may have, in fact, been phlegmons due to the lack of specificity of CT-based diagnosis.

Dr. Manning suggests that, because surgical drainage of SPA can prevent progression to blindness, all abscesses should be surgically drained. However, as noted by Harris [1], Hornblass [2], and Spires [3], SPA can progress to blindness and other serious sequelae despite early surgical intervention. Surgical intervention does not guarantee success. Furthermore, it should be remembered that ethmoidectomy, either by classical external approach or the newer endoscopic means, has associated morbidity, including diplopia, intracranial extension of infection, and blindness.

The authors' personal experience with the approach outlined in our paper has continued to be favorable in the years subsequent to the 1982–1986 period examined in our paper. With minor modification, the protocol we describe has been used successfully at Yale-New Haven Hospital, Tripler Army Medical Center, University of Miami Medical Center, Children's Hospital of Pittsburgh and St. Christopher's Hospital for Children. Our collective experience suggests that about half of the affected children can be spared an operation in this way and we have had no serious adverse outcomes.

Given the inaccuracies of imaging techniques and attendant morbidity of ethmoid sinus surgery, we would ask that Dr. Manning and other otolaryngologists consider our experience with *selective* non-surgical management of orbital subperiosteal abscesses when determining their personal risk/benefit analyses.

Sincerely,

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References

- 1 Harris, G.J., Subperiosteal abscess of the orbit, *Arch. Ophthalmol.*, 101 (1983) 751–757.
- 2 Hornblass, A., Herschorn, B.J., Stern, K. and Grimes, C., Orbital abscess, *Survey Ophthalmol.*, 29 (1984) 169–178.
- 3 Spires, J.R. and Smith, R.J.H. Bacterial infections of the orbital and periorbital soft tissues in children, *Laryngoscope*, 96 (1986) 763–767.