

(predominantly intensive care related) and were able to demonstrate a greater than 98% safety when mobile phones were maintained at a distance greater than 1 m. The recommended safe distance of 1 m has become known as the 'arm's length rule'. In one study, a CO₂ airway adapter and haemoglucostix meter suffered interference,³ while another study demonstrated adverse effects in a physiological monitor along with other equipment, but none was affected by the fields over 1 m.⁴ Effects on physiological monitors, defibrillators and pacemakers have been described,^{1,5-8} but were transitory and occurred only in close proximity (tens of centimetres). Other studies with implantable defibrillators found no interference at all,⁹ or concluded that 'although interference can happen it would rarely be clinically important.'¹⁰

In light of the evidence available, perhaps a relaxation of mobile phone restrictions in the ophthalmology department should be considered for doctors, especially as forthcoming advances in telecommunications are likely to herald the advent of medical data transfer on these devices. Further, ophthalmology departments do not routinely utilize critical care equipment. Many eye units are located out of the main path of core hospital equipment, and even for those that are near risk areas (intensive care, operating theatres, and cardiac units, for example), or have their own operating theatres interference would be highly unlikely given the range at which it occurs (<1 m). A precautionary measure would be to have all phones switched off (mobile-free zones) within these risk areas with clearly defined borders analogous to no smoking areas. It has been suggested that many already ignore the total ban usually present.¹¹

If the restriction of mobile phone use in the ophthalmology setting is to continue, a more justified reason might be that of social disturbance as proposed by the city of New York.

References

- 1 Electromagnetic compatibility of devices with mobile communications. Device Bulletin MDA DB 9702, 1997.
- 2 Irnich WE, Tobisch R. Mobile phones in hospitals. *Biomed Instrum Technol* 1999; **33**(1): 28–34.
- 3 Tat FH, Wah KC, Hung YH. A follow-up study of electromagnetic interference of cellular phones on electronic medical equipment in the emergency department. *Emerg Med* 2002; **14**: 315–319.
- 4 Robinson MP, Flintoft ID, Marvin AC. Interference to medical equipment from mobile phones. *J Med Eng Technol* 1997; **21**(3-4): 141–146.
- 5 Chen WH, Lau CP, Leung SK, Ho DS, Lee IS. Interference of cellular phones with implanted permanent pacemakers. *Clin Cardiol* 1999; **19**(11): 881–886.
- 6 Wilke A, Grimm W, Funck R, Maisch B. Influence of D-net (European GSM-Standard) cellular phones on pacemaker function in 50 patients with permanent pacemakers. *Pacing Clin Electrophysiol* 1996; **19**(10): 1456–1458.
- 7 Naegeli B, Osswald S, Deola M, Burkart F. Intermittent pacemaker dysfunction caused by digital mobile telephones. *J Am College Cardiol* 1996; **27**: 1471–1477.
- 8 Trignano AJ, Azoulay A, Rochdi M, Campillo A. Electromagnetic interference of external pacemakers by walkie-talkies and digital cellular phones: experimental study. *Pacing Clin Electrophysiol* 1999; **22**: 588–593.
- 9 Fetter JG, Ivans V, Beneditt DG, Collins J. Digital cellular telephone interaction with implantable cardioverter-defibrillators. *J Am College Cardiol* 1998; **31**(3): 623–628.
- 10 Tri JL, Hayes DL, Smith TT, Severson RP. Cellular phone interference with external cardiopulmonary monitoring devices. *Mayo Clin Proc* 2001; **76**(1): 11–15.
- 11 Aziz O, Sheikh A, Paraskeva P, Darzi A. Use of mobile phones in hospital: time to lift the ban?. *Lancet* 2003; **361** (3): 788.

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Sir,

Squamous cell carcinoma of the frontal and ethmoidal paranasal sinuses masquerading as acute dacryocystitis

Acute dacryocystitis involves suppurative inflammation of the lacrimal sac and perilacrimal tissue, usually secondary to blockage of the nasolacrimal duct with resultant stasis. It commonly resolves on systemic antibiotic therapy, with or without surgical drainage.¹ We present a case of 'dacryocystitis' unresponsive to conventional antibiotic therapy, which on subsequent investigation proved to represent squamous cell carcinoma arising from the paranasal sinuses.

Case report

A 79-year-old female subject presented with a 5-week history of right epiphora and bilateral medial canthal pain. In response to oral amoxicillin, prescribed by her physician, the watering and pain at the right medial canthus had resolved; pain, redness, and swelling, however, persisted at the left medial canthus. Her medical history included type II



Figure 1 CT scan shows a midline soft-tissue mass eroding the nasofrontal complex, which extends laterally to involve the medial canthus of the left orbit.

diabetes mellitus, systemic hypertension, and osteoarthritis.

On examination, the left medial canthal area was swollen, erythematous and tender, manifesting a 'pointing' fluctuant mass suggestive of a lacrimal abscess. A conjunctival swab was taken for bacterial culture and sensitivity testing. Systemic coamoxyclav and flucloxacillin were prescribed on an outpatient basis.

After 10 days, there was symptomatic improvement and the mass was smaller. The nasal bridge, however, appeared flattened; on palpation, the mass was now hard, nontender, and immobile. Bacterial cultures had been nonproductive. Otorhinological opinion was therefore urgently sought. CT scan revealed an irregular soft-tissue tumour of the paranasal sinuses, centred on the nasal bridge, extending laterally to involve both medial canthi, posteriorly to involve the sphenothmoid recess, and superiorly to involve the anterior cranial fossa (Figure 1). Fine-needle aspiration cytology confirmed a diagnosis of squamous cell carcinoma. In the absence of systemic metastatic disease, radiotherapy was adjudged the most appropriate therapeutic option.

Comment

Acute dacryocystitis is not uncommon in the elderly. Inflammation of the paranasal sinuses has been reported to masquerade as 'pseudodacryocystitis'.² Recurrent or resistant 'dacryocystitis' should however, alert the clinician to the possibility of other serious underlying pathology. It is also noteworthy that the clinical features of a mass may be initially deceptive,

especially if coloured by superadded infection or inflammation — hence the need for serial critical evaluation.

Tumours of the paranasal sinuses and nasal cavity account for 0.2–0.8% of all carcinomas in the body.³ In the UK, the incidence of nasal tumours is about 10 per million population per year.³ As with any rare condition, a high index of suspicion is therefore essential. Owing to the anatomical proximity of the nasal cavity and sinus to the orbit, pharynx, roof of oral cavity, and cranial structures, tumour spread may produce variable clinical presentations including proptosis, Horner's syndrome, ophthalmoplegia, epistaxis, loose-fitting dentures, and ninth and tenth cranial nerve palsies.

Therapeutic options for disseminated disease include radical surgery, radiotherapy, and chemotherapy or combination therapy. Half of such tumours are incurable.^{3,4} Nevertheless, a conservative approach almost invariably results in further disfigurement, rendering the aforementioned modalities valuable in this context.

Serial clinical evaluation of any unusual mass, coupled with a high index of suspicion is, therefore, vital until definitive diagnosis is established. Prompt referral to other specialties is also of paramount importance in the context of any diagnostic uncertainty.

References

- 1 Dailey RA. Dacryocystitis. In: Fraunfelder FT, Roy HF (eds). *Current Ocular Therapy*, 4th ed. W.B. Saunders Company: London, 1995, pp 687–688.
- 2 Remulla HD, Rubin PA, Shore JW, Cunningham MJ. Pseudodacryocystitis arising from anterior ethmoiditis. *Ophthalmic Plast Reconstr Surg* 1995; **11**(3): 165–168.
- 3 Stell PM, Maran AGD. *Stell and Maran's Head and Neck Surgery*, 4th ed. Chapter 19. Butterworth and Heinemann: Oxford, 2000, pp 377–395.
- 4 Miller RH, Sturgis EM, Sutton CL *Head and Neck Surgery*, 15th ed. William & Wilkins: Baltimore, MD, 1996, pp 194–205.

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