cystoid macular oedema, cataract, and phthisis (if more than 2 to 3 clock hours of ciliary body is excised).[3,4]

Local recurrence typically occurs within months to a few years after resection of ciliary body or choroidal melanomas. In one case series, all local recurrences occurred within 7 years of surgery.[4] There has been one report of local recurrence at 8.5 years after surgery.[5] In our case, local recurrence occurred 18 years after surgery, which is the longest interval reported to the best of our knowledge. The pathogenesis of local recurrence at such a long interval is probably due to the growth of microscopic deposits of the original tumour that had been controlled by the host-immune response.[6]

Delayed local recurrence has also been reported after the treatment of choroidal melanomas by argon laser photocoagulation (8 years)[7] and xenon photocoagulation (13 years).[8] Orbital recurrence has been reported at an interval of 20 years following enucleation.[9] The occurrence of delayed local recurrence following newer treatment modalities such as proton beam therapy and transpupillary thermotherapy remains to be determined. This case report demonstrates the need for life-long follow-up after treatment of uveal melanomas to exclude local recurrence.

References

1 Damato BE. *Ocular Tumours—Diagnosis and Treatment*. Butterworth- Heinemann: Oxford, 2000.
2 Damato BE, Paul J, Foulds WS. Predictive factors of visual outcome after local resection of choroidal melanoma. *Br J Ophthalmol* 1993; **77**: 616–623.
3 Damato BE, Foulds WS. Surgical resection of choroidal melanoma. In: Ryan SJ (ed). *Retina*, 2nd ed., Vol. **1**. Mosby: St Louis, 1994, pp 803–804.
4 Damato BE, Paul J, Foulds WS. Risk factors for residual and recurrent uveal melanoma after trans-scleral local resection. *Br J Ophthalmol* 1996; **80**: 102–108.
5 Shields JA, Shields CL, Shah P, Sivalingham V. Partial lamellar sclerouvectomy for ciliary body and choroidal tumors. *Ophthalmology* 1991; **98**: 971–983.
6 Tarin D. Cancer metastasis. In: Peckham M, Pinedo H, Veronesi U (ed) *Oxford textbook of oncology*, Vol. **1**. Oxford university press: Oxford, 1995, pp 121–122.
7 Brancato R, Menchini U, Pece A. Enucleation after argon laser photocoagulation for choroidal melanoma. *Ann Ophthalmol* 1988; **20**: 296–298.
8 Akduman L, Olk RJ, Green K. Local recurrence of choroidal melanoma 13 years after successful xenon arc photoablation. *Retina* 2000; **20**: 212–213.
9 Shields JA, Augsberger JJ, Dougherty MJ. Orbital recurrence of choroidal melanoma 20 years after enucleation. *Am J Ophthalmol* 1984; **97**: 767–770.

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Sir,

Mobile phone interference in the ophthalmology department

Communication is greatly facilitated by mobile phones (cell phones) and their use is now commonplace among doctors. The current restrictive policy in ophthalmic departments seems to be unjustified given the absence of evidence. There is no published work relating to such departments or their equipment, and the studies available suggest that there is minimal risk to most hospital equipment.

Mobile networks operate by receiving and transmitting their signals via relay stations at carrier frequencies between 900 and 1800 MHz. Electromagnetic interference occurs where the mobile, which is an intentional radio transmitter, causes an electronic piece of equipment to act as an unintentional radio receiver. Global System for Mobile communication (GSM) employs a cellular structure in which a base station is used to provide access over a narrow bandwidth. The telephone senses how close it is to the cellular network antenna and increases or decreases its own energy in order to adapt to its environment (adaptive energy), altering the absolute degree interference of individual telephones in any one place. Interference is highest at the initial stages of an outgoing or incoming call.

The issue of mobile phone interference in hospitals first came to attention in the United Kingdom in 1994 when the UK Medical Devices Agency (MDA) issued a safety notice that prompted a detailed study published in 1997.[1] Only 4% of 178 devices examined suffered interference from mobile phones, with less than 0.1% showing serious effects. They recommended that phones should be switched off in areas where sensitive devices may be used (including operating theatres). None of the devices tested are routinely used in the ophthalmology setting. Irnich and Tobisch[2] tested more than 220 electronic medical devices in a hospital environment

(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 CO_2 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 Trigano 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-defibrillatorsa. *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 amoxycillin, 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