Letters and comments

Contributors to this section are asked to make their comments brief and to the point. Letters should comply with the Notice printed on the inside back cover. Tables and figures should only be included if absolutely essential and no more than five references should be given. The Editor reserves the right to shorten letters and to subedit contributions to ensure clarity.

Laparoscopic procedures are associated with a significant risk of digital nerve injury for general surgeons

RE Lawther, GR Kirk, MC Regan

Department of Surgery, Royal Victoria Hospital, Belfast, UK

There have been sporadic reports of laparoscopic instruments causing digital nerve injuries in surgeons.^{1–5} The concern, regarding such injuries, is that they may alter tactile sensation to an extent that the surgeon's performance is impaired in subsequent operations. Our department recently investigated this occupational hazard through a questionnaire which was sent to all consultant general surgeons in Northern Ireland who routinely perform laparoscopic surgery.

Of 53 questionnaires posted, 50 replies were received (94% response rate). Of the 50 respondents, 20 surgeons (40%) had, at some time, experienced a digital neuropraxia following a laparoscopic procedure. The median duration of symptoms was 9 h and the median number of episodes was 4.5. Of the 20 symptomatic surgeons, 9 (45%) reported numbness on the right thumb only, 6 (30%) reported numbness on the left hand only, while 5 (25%) reported bilateral numbness. The ulnar aspect of the thumb was most commonly affected. The group of surgeons who had experienced numbness performed significantly more laparoscopic procedures per year than the asymptomatic group (45.0 [range, 4–100] versus 30.0 [range, 11–300] procedures per year, $P < 0.05$ Mann-Whitney U test). There was no association between number of years performing laparoscopic surgery and the incidence of this complication (10.0 [range, 4.0–12.0] versus 10.0 [range, 7.0–12.0] years).

We believe that these injuries are due to the fact that the video display unit magnifies the operative field and thus small hand movements are exaggerated on screen. In an attempt to reduce shake and perform accurate movements, surgeons therefore tend to hold the instruments tighter than they would if they were operating on an open wound

causing pressure on the digital nerves. If this increased pressure on the digital nerves is prolonged, for example during difficult dissection or lengthy retraction, a neuropraxia may result. Improved ergonomics could be achieved by redesigning instruments with larger contoured surface areas and without angular elevation. This should reduce the pressure transmitted to the operator's digital nerves and lower the frequency of this complication.

References

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Correspondence to: Mr RE Lawther, RCSE Research Fellow, Department of Surgery, Institute of Clinical Science, The Queen's University of Belfast, Grosvenor Road, Belfast, UK
E-mail: roger.lawther@talk21.com

Misting of eye protection during surgery

John Mountney

Department of Orthopaedic Surgery, Southampton General Hospital, Southampton, UK

The need for eye protection during surgery is well recognised, but often disregarded due to misting of lenses and visors. Exhaled breath is warmer and more humid than the air circulating in operating theatres, and

causes misting of eye protection as it escapes from the surgical mask.

Margrain and Owen¹ have described the misting characteristics of spectacle lenses, and conclude that environmental factors and the characteristics of the lens itself influence misting. Water vapour in atmospheric gases forms as condensation when the lens is sufficiently cooler than the air surrounding it, a point in fluid mechanics known as the 'dew point'. Thus the warmer the lens, the less likely it is to mist as the warm humid exhaled breath passes over it.

The surface properties of the lens can also be altered by surfactants applied to their surfaces. Surfactants (surface-active agents) include a wide range of materials that alter the properties of water and other liquids. The physical chemistry behind their action is complex; however, the effect is to reduce precipitation onto the lens and hence decrease misting. Surfactants are readily available in waxes, creams and sprays from outlets catering for ski goggles, motorcycle visors, etc.

In summary, the use of demisting products and putting on warm glasses (personally, I warm mine up by putting them down the front of my theatre shirt whilst positioning the patient, and I use a surfactant wax) stops my safety glasses from misting during surgery.

References

1. Margrain TH, Owen C. The misting characteristics of spectacle lenses. *Ophthalmic Physiol Opt* 1996; **16**: 108–14.

Correspondence to: Mr John Mountney, Specialist Registrar, Department of Orthopaedic Surgery, Southampton General Hospital, Tremona Road, Southampton SO16 6YD, UK

Response to article by

GS Arul & RD Spicer

Ecthyma gangraenosum – a trap for the unwary

Ann R Coll Surg Engl 2001; **83**: 47–8

Simon Eccles, Peter Butler, Simon Withey, Mike Jacobs

We read with dismay the recent article by Arul and Spicer,¹ and are concerned both with inaccuracies of nomenclature and a misleading final message.

We admit that the nomenclature can be confusing. Necrotizing fasciitis is an uncommon, severe infection involving

the subcutaneous soft tissues and immediate surgery is the corner-stone of management. Necrotizing fasciitis encompasses several bacteriological entities, which can be conveniently classified into two groups. Type I includes anaerobes and is polymicrobial, commonly with one or more members of the Enterobacteriaceae (e.g. *Escherichia coli*, *Enterobacter* spp., *Klebsiella* spp.) and/or other organisms such as enterococci. In type II (which is also known as haemolytic streptococcal gangrene), the primary pathogen is group A streptococcus, sometimes in combination with other organisms such as *Staphylococcus aureus*. Necrotizing fasciitis of types I and II can not readily be distinguished on clinical grounds. Fournier's gangrene, far from being a distinct entity, is an eponym used for necrotizing fasciitis occurring about the male genitalia and is usually, but not always, type I.

Prompt diagnosis and treatment of necrotizing fasciitis reduces mortality.² We believe that there is a clear algorithm of care for any patient with suspected necrotizing fasciitis. The key initial steps are:

1. Patient resuscitation.
2. Immediate surgical debridement. Tissue and pus samples should be sent for analysis.
3. Initiation of antimicrobial therapy to cover anaerobic bacteria, Enterobacteriaceae and streptococci (e.g. ampicillin, gentamicin and clindamycin).
4. A second surgical assessment in theatre at 24 h.
5. Modification of the antimicrobial regimen based on Gram-stain and culture results.

We cannot envisage any instance where a suspected case of necrotizing fasciitis should be not explored surgically. We strongly refute the authors' conclusion that surgical debridement of suspected necrotizing fasciitis of the perineum should be avoided, irrespective of the patient's immune status.

The case report was entitled 'Ecthyma gangraenosum – a trap for the unwary'. If inadvertently operating on a case of pseudomonal soft tissue infection is likened to a mouse-trap, then delay in surgical debridement of necrotizing fasciitis should be considered a tiger-trap.

References

1. Arul GS, Spicer RD. Ecthyma gangraenosum – a trap for the unwary. *Ann R Coll Surg Engl* 2001; **83**: 47–8.
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Correspondence to: Simon Eccles, 24 Querrin Street, Fulham, London SW6 2SJ, UK. E-mail: simon.eccles@btinternet.com