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.

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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.
2. Stamencovic I, Lew PD. Early recognition of potentially fatal necrotizing fasciitis: use of frozen-section biopsy. *N Engl J Med* 1984; **310**: 1689.

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