Sterilization of phacoemulsification handpieces

Dear Editor,

A recent editorial briefly discussed some issues concerning small incision cataract surgery including phacoemulsification.[1] I would like to bring some related matters to the attention of my colleagues.

It seems to be an open secret that sterilization of phacoemulsification handpieces between cases is not the norm in many operating rooms in our country. And while sterilization of the tips alone is probably better than no sterilization, it is neither safe, nor is it preferred practice. I have also heard comments that the handpiece "tuning" process itself is sufficient to sterilize the tips; this creates a false sense of security not based on any evidence whatsoever. I had suggested poor training as one remediable cause of such malaise.[2] There are other measures involving the industry that also need to be addressed.

While the primary responsibility is the surgeon's, the industry supplying the phacoemulsification machines may be guilty of omission; they could do more. The need for strict sterilization protocols for the handpieces and machines can easily be disseminated and demonstrated at the time of installation and corrected during service calls. Printing the recommendation in the brochure is good preventive practice, but probably not good enough to counter accusations when something goes wrong: correcting misplaced beliefs such as the (lack of) need to sterilize the handpieces or the effect of ultrasound energy on tip sterilization is partly the industry's responsibility. Regrettably I have been unable to persuade those in the business that I have spoken to, to specifically educate their customers about these aspects. They seemed strangely reluctant to instruct or officially condemn the non-sterilization of phacoemulsification handpieces between cases.

The risk of infection with and appropriate sterilization procedures for machines with internal tubings is a controversial matter. While there are publications linking internal tubings to infections,[3-5] I am told there is also one non-peer-reviewed company document to refute this. Having experienced infections tracked to such internal tubings by modern epidemiological and microbiological techniques, I have tried to convince one reputed manufacturer of such machines to at least disseminate newly revised cleaning instructions for their product to their numerous installations. Implementation was promised 2 years ago. However, despite the fact that the revised protocol was developed by their own engineers they have, to date, neither committed to its dissemination nor demonstrated to it their customers. They have not even done this for all customers with service contracts. Perhaps they have too many installations to cater to or are overly worried about the possible fall out, but I do think industry responsibility should go beyond the sale of their machines. Indeed I get this distinct feeling of déjà vu: we experienced a similar lack of responsibility and follow-up with contaminated irrigating solutions used in cataract surgery.[6] Internal tubings may be more controversial and may not merit product recall, they certainly merit post-sales education of safety measures developed by their own engineers.

Whereas the issue of internal tubings and infections may be contentious, the actual training of novice surgeons on patients by company technicians is certainly not;[1] it is a crime. Again, while they concur with my point of view on this unsafe practice in casual conversation, I have been unable to persuade even the same company to take an official stand on this.

We can only speculate on the reasons for this casual attitude and how commercial concerns may tie in. I am bringing these issues to the attention of the readership since it is eventually our responsibility to ensure safe practices, not only by our colleagues, but our industry partners as well.

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