

The Nightmare of TASS

TASS. In 2006, no other four-letter word will make a cataract surgeon cringe more. Until recently, many ophthalmologists had never heard of TASS (toxic anterior segment syndrome), because the term was coined in 2000. Because most cases are probably mild, isolated, and self-limited, it is safe to say that TASS has been the most common unreported and unappreciated complication of cataract surgery. All of this changed during the past year, beginning with a major TASS outbreak that resulted in the recall of all balanced salt solution from Cystosol, the manufacturer of both its own independent brand as well as Endosol from Advanced Medical Optics, Inc. Months later, we calamitously find ourselves amidst the largest TASS outbreak ever, with nearly 90 centers nationwide reporting cases and with the etiology still undetermined at press time.

There is no laboratory test to establish the diagnosis or to elucidate the cause of TASS. It becomes a confidence-shattering numbers game—one of analyzing large clusters, instituting changes by a process of elimination, and then waiting until new cases fail to materialize. We owe an enormous debt of gratitude to Nick Mamalis, MD, a one-man ophthalmic version of the Centers for Disease Control and Prevention (CDC). By heading the ASCRS-funded TASS registry at the University of Utah and in working with the CDC, Nick has spent countless hours investigating the current outbreak. In the process, he has often been the sole source of emotional support for the many surgical teams involved. Indeed, as illustrated by Stanley Berke, MD, in his article in this issue (page 67), frequently lost amidst the epidemiologic analyses is an appreciation of the emotional stress for the patient, the surgeon, and the ASC's staff. Every case generates confusion, anxiety, professional stigma, and difficult clinical and medicolegal decisions.



Although TASS clusters are frightening and demoralizing, it is the isolated case that is the most clinically challenging. Four years ago, I examined a 50-year-old man who for years had been terrified by the prospect of cataract surgery and thus delayed having it because his other eye had been enucleated. For this reason, he flew from Southern California to have me perform his operation, although I was outside of his HMO. Imagine the sickening feeling I had upon discovering a hypopyon on the morning following his uncomplicated surgery. I asked the head

surgical nurse if anything different had been done the day before. It turned out that the phaco machine's pump had been replaced the previous Friday and that my patient had been the first to have surgery with that particular machine. Because his vision was fairly good and there were no vitreous cells, I suspected TASS and nervously decided to monitor him on intensive topical steroids. He never worsened, and to our relief his inflammation was gone 72 hours later.

It turned out that the repair technician carried around an empty infusion bottle that he filled with tap water whenever he needed to test a phaco machine. In the absence of any protocol to the contrary, he reasoned that this was more economical than opening a new bottle of balanced salt solution every time. Municipal tap water often contains gram-negative, heat-stable endotoxins that, in all likelihood, were deposited into our phaco handpiece's lumen during the testing. From there, they were washed into the very first patient's eye. How many cases diagnosed as culture-negative "infectious" endophthalmitis are actually due to TASS is unknown. Neither will we ever know how many cases of undiagnosed TASS this repair technician may have caused. It behooves all of us to become educated, to review our OR protocols, to be vigilant, and to report all cases of TASS to the ASCRS-Utah registry. ■

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