

THE CALL EVERY



SURGERY

CENTER DREAMS

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It's the call every surgery center nursing director dreads. Dr. Smith, who operated at your center yesterday, calls you late in the morning to say he thinks three of his patients have TASS.

TASS stands for Toxic Anterior Segment Syndrome. It is an acute inflammatory reaction after cataract surgery. You can sense his anxiety as he tells you he has sent cultures to rule out bacterial endophthalmitis. However, given the rapid onset of the symptoms, he is quite certain it is TASS. You take down the patient names and try to reassure the surgeon you are "on it" and will get back to him as soon as possible, hopefully with some answers.

IMMEDIATE ACTION

Ambulatory surgery centers (ASCs) are required to query surgeons regularly to identify postoperative complications and infections. In ophthalmology, surgeons rarely wait to be asked. Given the very serious implications of complications post-cataract surgery, they typically inform the facility immediately. This is greatly appreciated because it allows the surgery center to open an investigation to identify possible sources of infection or TASS and take action to eliminate the cause and avoid further complications.

You immediately spring into action pulling yesterday's surgery schedule and patient medical records to start the data collection process. Relevant data may include and is not limited to:

- OR (if you have more than one)
- OR staff (scrub, circulating nurse)
- Instrument tech (who processed the instruments for those cases)
- Surgical prep
- Sterilizer used
- Biological monitor for the sterilizer
- Sterilizer cycle (review the sterilizer printout or computer record)
- Reusable vs. disposable tubing
- Phaco machine used
- Viscoelastic used (and lot numbers)
- Medications (pre-, intra-, and postoperative). Was the patient blocked? Did the patient get intracameral medication? Were there additives in the irrigating solution?
- Order of the cases
- Instrument tray used

You know TASS occurs in response to an external toxin or contaminant. Therefore it is critical to identify the source to preclude a chronic TASS outbreak at your facility. A prime differentiator of TASS from bacterial endophthalmitis is the rapid onset of symptoms, which usually occur within 12–24 hours postoperatively. The differential diagnosis will be confirmed when the culture comes back negative.

ANALYZING DATA

In your investigation, you know prime suspects are any kind of preservative used in the irrigation solution or intracameral medications, instrument decontamination, and sterile processing.

You have invested a great deal of time scrutinizing your instrument-processing standard operating procedures. You have reviewed all the relevant manufacturer instructions

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for use (IFUs) to make sure your processes are consistent with manufacturer recommendations. This includes your instruments, hand pieces, sterilizers, ultrasonic, etc. You know staff education and training to ensure the consistency of instrument processing is vital to avoiding postoperative infections and complications. You continually reinforce the standard procedures and ensure a thorough orientation of new personnel involved in instrument processing. You even periodically monitor the process yourself to make sure your personnel are doing it properly. Even the slightest remnant of viscoelastic left on the instruments or in a lumen and “baked” in the sterilizer, when introduced into the eye, can be sufficient to cause TASS.

Once you have gathered all the data in a table (Excel is helpful to organize the data), one of the first things you notice is that the three TASS cases used the same tray. Dr. Smith had eighteen cases yesterday. You have five trays for this particular surgeon and tray number five was used on all three of the cases in question. This is useful information because it raises the suspicion that the culprit is probably something to do with instruments or instrument processing. You analyze the data to rule out other potential causes. Only preservative-free epinephrine was introduced into the balanced salt (BSS) irrigating solution. You recall a previous experience with TASS that pointed to Vancomycin used in the BSS and you know there were no preservatives introduced into the eye based on Dr. Smith's preferences and a review of the medical records.

Upon further investigation you realize the same instrument tech processed the tray in question each time. Fortunately, that tech happens to be working today. Without pointing fingers or placing blame, you explain the situation and tell her you want to watch her process the next set of instruments that comes into soiled utility. You notice she does not dispose of and replace the cannula on the tray. Because the lumen is so small, it is almost impossible to flush a cannula and assure removal of any remnants of viscoelastic. A new cannula should be used on every case.



When you query the other instrument techs about the process, they always discard and replace the cannula when they turn over the tray. You are hopeful you have identified the problem, because it is an easy fix. Even though all your instrument techs get the same training, this experience underscores the importance of consistently monitoring the process and educational reinforcement. You use this experience as a teaching moment and emphasize the significance of the work your techs do and how important it is to consistently adhere to established procedures.

FOLLOW-UP

As expected, Dr. Smith's patients have negative cultures. They are responding well to topical steroidal therapy.

When you discuss your findings with Dr. Smith, he expresses relief. Identifying a likely source provides some reassurance that the risk has been mitigated for next week's patients.

While no nursing director looks forward to a call like this, s/he is grateful for the information and the opportunity to aggressively pursue an investigation to promote optimal outcomes for future patients. **AE**



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