Cluster Outbreak of TASS in a Day Surgery

What is TASS?

An acute, non-infectious inflammation
Affecting the anterior segment of the eye
Complication of anterior segment intraocular eye surgery
Cataract extraction is the most common form
Syndrome typically develops within 24 hours of surgery
Characterised by corneal oedema, accumulation of white cells, protein or fibrin deposits
Resulting in blurred vision and redness
Inflammatory response → serious damage → vision loss
Treated effectively with topical steroids and/or nonsteroidal anti-inflammatory agents

Literature review

Reported in the literature for nearly 2 decades, incidence unknown
Large outbreak in 2005 across 80 North American centres
Relatively under recognised potential complication associated with cataract surgery
Often misdiagnosed, frequently associated with infectious endophthalmitis
Individual clusters occur sporadically
Often specific cause of outbreak is not identified
Multiple causes and associations implicated
Difficulty for surgical centres to isolate a direct cause
Not a reportable condition in Australia
Causes and associations

- Contaminants on surgical instruments
  - Improper or insufficient cleaning
- Products introduced into the eye during surgery
  - Irrigating solutions or ophthalmic medications
- Other substances that enter the eye during or after surgery
  - Topical ointments or powder from surgical gloves

Situation

13/06/13 IPC received call from DON of a 2 theatre day surgical hospital

Ophthalmic surgeon reported 3 of his patients had developed TASS post cataract surgery performed at the hospital.

DON requested review of surgical ANTT and reprocessing of ophthalmic instruments.

To be undertaken 18/06/13 when surgeon and scrub nurse next performing cataract surgery.

Systematic review of work practices undertaken in conjunction with surgical and CSSD teams.

Fluids, solutions and medications and 3 cases also reviewed.

To rule out any potential source of TASS where able.

Findings

3 patients between 13/03/12 – 22/05/12 seen by ophthalmologist for post cataract surgery follow-up.

Presented with non-painful blurry vision the day after unilateral phacoemulsification and IOL implantation surgery.

Patients clinical symptoms and response to topical steroids and antibiotics resolved after a few days.

Consistent with TASS

- 2 females (12/03/12 & 07/05/12) and 1 male (21/05/12) with a median age of 81.3 years.
- Surgery performed on the left eye of all 3 patients.
- Performed towards the end of the morning or afternoon list.
Surgeon
Fellow of Royal Australian College of Ophthalmologists
Practicing for 20 years
One of two ophthalmologists operating at the day surgery hospital
Performed surgeries fortnightly
Had not previously had patients with TASS
Reported that he had not made any changes in his surgical technique before or after the cluster
- Ceased use of intraoperative lidocaine after the 2nd case

Scrub nurse
Commenced working with the ophthalmologist in February the same year
Scrubbed for each of the cases and all other cataract surgeries performed by the ophthalmologist
Worked at one other dedicated eye day surgery
Scrubbed for cataract surgery for 3 years
No other patients scrubbed for had subsequently developed TASS

Surgical ANTT
Hand scrub/rub, gowning and gloving techniques
Surgical hand disinfectants
Latex and latex-free powder-free gloves
Set-up of procedure trolley including dispensing
Pre-operative skin disinfection of patient
Surgical draping
Surgical ANTT

Aseptic transfer of instruments, devices, irrigating solutions and medications

Surgical technique

Debris removed from intraocular instruments after each use

Povidone-iodine 5% w/v cutaneous solution dispensed from multi-use container

Reusable tips and cannulas observed to be used, reported to be blocked on use or tips damaged

Batch/lot numbers of devices, solutions and medications not documented

Reprocessing of RMD - Cleaning

Eye instruments manually pre-cleaned and mechanically cleaned in ultrasonic with mildly alkaline agent

Internal surfaces flushed using adaptor and syringe

Rinsed with distilled water

Internal lumened surfaces dried with air gun, external surfaces dried with lint free disposable towels

Manual cleaning agent and distilled water not measured

Irrigation and aspiration ports not flushed with minimum volume recommended

Single-use flushing syringe disposed of at the end of each list

Instruments mechanically cleaned for 5 minutes

Ultrasonic solution changed once per list

Only 3 Phaco handpieces available; quick reprocessing turnaround time to meet list demands

Reprocessing of RMD - Sterilisation

All eye instruments sorted, wrapped/packaged, sterilised, tracked and traced

Staff reported problems with steriliser overheating failure to meet physical parameters
Preventing additional cases

Closely monitor routine cleaning and sterilisation of reusable ophthalmic instruments and related equipment.

Minimise use of reusable instruments where single-use disposable available.

Review product traceability system and keep detailed record (lot and batch numbers) of all products and equipment used for each case.

Liaise with manufacturers/suppliers of solutions, medications and single-use devices.

Dispense Povidone-iodine antiseptic from single-use containers.

And the story goes on...

Cause not identified.

4th case of TASS reported by ophthalmologist following phacoemulsification and IOL implantation surgery to right eye on 08/10/12.

Ophthalmologist ceased performing cataract and all other intraocular surgery.

AICAlist posting 03/10/13 from Jo-Anne Bentall.
References


Resources

WASIG Terms of Reference
Inaugural breakfast forum presentation 9 August 2013
Evaluation summary report 9 August 2013

https://www.acipc.org.au/members-area/special-interest-groups/wa-state-sig

Next forum Friday 7 February 2014 7.30am – 9.00am
Venue to be advised
Topic environmental cleaning or NSQHS Standard 3 Accreditation Experiences

Don’t forget to renew your College membership for 2013 – 2014