


# Cluster Outbreak of TASS in a Day Surgery



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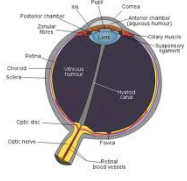
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## What is TASS?

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



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## 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



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## 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



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## 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



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## 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



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## 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 2<sup>nd</sup> case



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## 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



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## 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



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### 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



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### 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



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### Reprocessing of RMD - Sterilisation

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

Staff reported problems with steriliser overexhausting → failure to meet physical parameters



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The 3 C's of Prevention



## 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

- Irrigation and aspiration cannulas

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

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## Preventing additional cases

Ensure required medications are free of preservatives


Obtain medications with lot numbers different from those used on the 3 cases for subsequent surgery if able to track back

Increase number of reusable Phaco handpieces to allow for adequate time for reprocessing

Ensure documented procedures/flow charts are instituted for all aspects of cataract surgery and reprocessing of RMD

Suspend all cataract surgeries if additional cases occur

The 3 C's of Prevention



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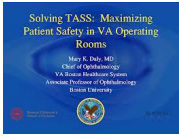
## And the story goes on...

Cause not identified

4<sup>th</sup> 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

AICAllist posting 03/10/13 from Jo-Anne Bendall



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## 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

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