Good infection control – learning from experience

Pippa Wysong
in Toronto

Good infection control in the hospital environment can stop a potential outbreak in its tracks, as medical staff found out in a Canadian hospital when three endophthalmitis outbreaks occurred between the years 2000 and 2003.

A description of the outbreaks, infection control, and how nurses can help prevent hospital-wide outbreaks was given by ophthalmic nurse Monica Balla RN, at the annual meeting of the Canadian Ophthalmological Society.

Patients have a right to expect safe treatment, she said, something that is clear in the standards and practices for infection control as dictated by Canadian nurse and health agencies. But even in hospitals with good infection control measures in place, infections can still occur and spread. In ophthalmology, the biggest potential problems include contaminated instruments and equipment, ocular flora, and complications from surgery and other procedures. In addition, medication bottles with lot numbers of medications, store medications properly.

“Hand-washing remains the single most important way of reducing transmission of this and other infections,” she said.

Conjunctivitis is tricky because it is highly contagious, and has both bacterial and viral causes. It can be due to staphylococcus, streptococcus or adenovirus. Symptoms include sticky eyelids due to discharge, conjunctival swelling, redness, tearing and irritation.

Common sources of infection for any of these agents include contaminated instruments and equipment, ocular flora, and complications from surgery and other procedures. In addition, medication bottles with contaminated tips with thriving colonies of bacteria or viruses are a source. Importantly, poor hand-washing practices are also a big source of infection and can contribute to the spread of infection throughout a hospital.

To prevent the spread of infection, there are several operating-room standards and practices that need to be followed, Ms Balla said. They include the following:

- Open instruments and packs only after the patient is brought into the room;
- Avoid flipping;
- Apply sterile povidone-iodine solution in the conjunctival sac (a sterile 10 per cent preparation);
- Use a full body drape on the patient, plus cover the eyelashes with a drape;
- Limit the amount of traffic going into the OR during procedures;
- Use medications from containers that are used only for that one patient;
- Avoid the practice of resterilisation of SUDs;
- Chart unusual events, fill out incident reports, include lot numbers of medications.

“Hand-washing remains the single most important way of reducing transmission of this and other infections,” she said.

Good charting is something staff sometimes don’t think about as playing a role in infection control. With good charting, the information can be used to reduce problems later on, she said. Details may be useful for helping centres plan for ways to prevent future outbreaks. It may also provide evidence in law courts if a legal case arises.

Other infection control measures include standardising patient care – making sure all patients go through the same pre-operative and postoperative infection control routines. Balla reminded the audience that cannulas need to be flushed immediately after use, and that an operating theatre needs to undergo ‘terminal cleaning’ if it was last used for a ‘dirty case’.

Steps should be taken in the clinic or office to reduce the chance of spreading infection too. Stick to routine practices of cleanliness. Use aseptic techniques for procedures that are invasive, and properly disinfect devices such as tonometers and contact lenses, she said.

When treating patients with ‘red-eye’, use isolation protocols so the infection won’t be passed on to other patients. Clean exam rooms and equipment with disinfectant, check expiration dates on medications, and store medications properly.

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“Outbreaks can occur in any practice, but you need to have a process in place ahead of time to deal with it. When managing an outbreak, know how many cases constitute an outbreak, have an outbreak team in place, and start an investigation immediately. Notify all surgeons and other staff. Do a risk assessment, discuss and implement your plan of action,” Balla said.

Learning from experience

Indeed, staff at the hospital changed and improved infection control after an endophthalmitis outbreak that occurred from July 2000 to November 2001. There were 12 cases out of 2,700 patients, a rate that was four times greater than the expected incidence, she said.
One-to-one approach yields happy cataract patients

Stefanie Petrou Binder MD
in London

Danish patients undergoing cataract surgery showed a 99 per cent satisfaction rate with the information they were given prior to cataract surgery, and with their subsequent surgical treatment, reported Tina Hoiland RN during an ESONT session at the XXIV Congress of the ESCRs.

Mrs Hoiland noted that her department carries out a survey on patient satisfaction every two years. The survey includes 10 per cent of the patients operated for cataracts in a given year, she told listeners.

“The thought behind the survey is to look for any aspects of care that need improvement and to find out which changes would help patients get the most out of their treatment,” she said.

The outcome of the survey conducted in 2005 showed that 99 per cent of operated patients were satisfied with the information they received in the clinic. More specifically, 99.7 per cent were satisfied with the information they received from the nurses and 99 per cent with the information given by the doctors.

Mrs Hoiland and her colleagues reported that their clinic sees 25,000 patients per year. They conduct around 4,300 cataract examinations each year, of which at least 3,600 go on to cataract surgery. Nurses in Mrs Hoiland’s department try to adhere to the principle that for each patient there should be one eye doctor and one nurse to whom they are assigned during the pre-surgical examinations.

On the day of surgery, after being admitted by the receptionist, the patient is admitted by the nurse. The nurse prepares the patient for surgery and the patient then has a “time out” during which the nurse can answer any questions he or she may have about the procedure. She places the patient on the operating table, connects the pulse oximeter, and administers local anaesthetic drops.

A Canadian nurse who attended the session noted that Mrs Hoiland’s patients were admitted to surgery fully dressed, with only a bonnet to cover their hair. She was curious about how the patients were further prepared for the surgery.

Mrs Hoiland said that the OR nurse drapes the patient about the head prior to surgery, cuts an opening in the draping, and puts the lid-holder in place. The surgical instruments are pre-prepared, as well as the assistant nurse’s instrument table. The surgeon then meets the patient and can begin the surgery. The nurse administers topical anaesthesia, which is followed by surgery and an eye patch, placed by the nurse.

Joy Bardy, a research nurse from Manchester, UK, was interested in knowing whether the use of topical eye drops alone for cataract surgery was considered satisfactory by Mrs Hoiland’s patients. Mrs Hoiland said that they employed topical anaesthesia exclusively and that patient satisfaction was very high.

Other congress attendees were interested in learning what the patient turnover rate was for the type of individual care Mrs Hoiland and her colleagues offered their patients. Mrs Hoiland was happy to say that her patients were treated within 20-30 minutes.

After surgery, patients leave the surgical unit and are accompanied back to the resting room where the nurse checks up on them. The nurse then discharges patients providing it is safe to do so. They return on the first postoperative day, for a check-up. The nurse cleanses the eyelid and provides verbal and written instructions on how to administer eye drops at home, and the surgeon performs a slit lamp exam.

Other areas in which nurses are active in Mrs Hoiland’s department include screening, glaucoma, eyelid surgery (such as ptosis), corneal disease, YAG laser for secondary cataract, visual field exams, as well as looking at patients referred from other departments from within the clinic, she said.

Mrs Hoiland is part of an expanding ophthalmologic department and works in a team of 11 eye specialists, of which nine are senior consultants, and 19 nurses, which includes 11 full-timers, eight part-timers, and two to three trainees. Seven of the nurses, including Mrs Hoiland herself, alternate between work at the ambulatory station and the operating room. The surgical centre includes neurology, orthopaedics, and gynaecology as well.

Written information regarding cataract surgery and other eye treatments comes in the form of an information folder and is translated into English, as well. The clinic holds regular meetings in which all nurses and physicians discuss the patients and the past and up-coming surgeries. They met the standards of quality controls at the clinic for 2003, 2005, and await the next one in 2007, she explained.

Session moderator Heather Waterman commented that the tension between cost-efficacy and patient satisfaction was a difficult one to balance. She applauded the noteworthy results on patient satisfaction that were seen from the survey results.

“Although we are very satisfied with our way of conducting patient services in Denmark, it is important that each surgical centre develop its own satisfactory way of running things. We think that we have succeeded in making our patients’ experience positive and have upheld the level of satisfaction,” Mrs Hoiland said.

joy.bardy@manchester.ac.uk
heather.waterman@manchester.ac.uk

Cont. from page 1

The outbreak happened in an ambulatory OR in an older room that has since been renovated. A risk assessment was done, and a number of changes in routine were made to get the outbreak under control, and to help prevent future outbreaks.

At the time the infections occurred, patients wore their street clothes when undergoing ophthalmic treatments. Now patients wore their street clothes when undergoing ophthalmic treatments. Now patients wore their street clothes when undergoing ophthalmic treatments.

 Patients are taught how to apply drops safely, and staff are given more education about infection control. In addition, patients are given a postoperative injection of Vancomycin to prevent infection.

“No other cases of endophthalmitis have been reported to date after the new protocols and practices were implemented,” she said.

smheyrn@hotmail.com