Cataract surgery in the US and Japan: East and West diverge

Samuel Masket MD

A recent comparison of cataract practice in the US and Japan yields some remarkably divergent findings, say researchers from both countries.

For example, the annual volume of cataract surgeries in Japan rose in the last few years, but has been rather flat in the US, surveys by the Japanese Society of Cataract and Refractive Surgeons (JSCRS) and the ASCRS find. In addition, ophthalmologists in the US continue to see outbreaks of toxic anterior segment syndrome (TASS) and an increase in the incidence of endophthalmitis; while Japan has not experienced a TASS outbreak in five years and has a low rate of endophthalmitis that might even be decreasing.

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Furthermore, a greater number of cataract surgeries are still performed in hospitals in Japan, a number that is steadily declining in the US.

“I think it’s most interesting to compare clinical experiences for the two countries. It seems that in some areas we are very similar and in others we are quite distinct,” said Samuel Masket MD, clinical professor of ophthalmology at the Jules Stein Eye Institute at the University of California in Los Angeles, California who co-moderated a session on cataract practices in Japan and the US at the annual ASCRS meeting in San Francisco, California.

In the US, the annual volume of cataract procedures fell by more than 60,000 in 2005 from 2.85 million in 2004 to 2.79 million. Since the margin of error is +/- 3 per cent on the survey one cannot say that there was a decrease but growth appears to be flat. Also, the volumes are just estimates and not absolute surgical numbers. The reason for the change is unclear, according to David Leaming, MD. Dr Leaming conducts annual surveys of the ASCRS and ESCRs members to evaluate trends in practice.

The JSCRS has approximately 1,000 members and started an annual survey in 1992. The latest survey, conducted in 2005 indicates continued growth in cataract volume, according to Tetsuro O Shika MD, PhD, professor of ophthalmology at the University of Tsukuba in Japan, who presented the JSCRS results.

Since 2002, an increasing number of cataract surgeries have been performed in outpatient facilities in the US. In Japan, a majority of procedures still involve a stay in hospital. This is in part because the Japanese government insurance system fully reimburses patients for hospital stays. However, the average duration of the hospital stay has decreased by more than 50 per cent in the last 10 years.

A 2004 JSCRS survey indicated that 62 per cent of the Japanese surgeons preferred acrylic lenses, 24 per cent preferred PMMA and 13 per cent used silicone. But in 2005, 85 per cent used small incision acrylic intraocular lenses and 34 per cent used silicone, a big change. Also, 72 per cent of the Japanese doctors expressed an interest in accommodating IOls and 59 per cent said they were interested in aspherical IOls, both increases from the year before. One third of those surveyed also expressed an interest in ultra-thin or blue-blocking IOls.

The 2005 Japanese survey indicated that 32 per cent of the Japanese surgeons use topical anaesthesia whereas 63 per cent of the American doctors use topical anaesthesia with or without intracameral lidocaine. The majority of Japanese surgeons surveyed inject the anaesthesia in the sub-Tenon space, with 11 per cent using retrobulbar anaesthesia and two per cent using intracameral injections.

The location of the wound in Japan is either in the superior quadrant in 32 per cent, oblique in 34 per cent, temporal in 21 per cent or steepest axis in 13 per cent. In the US, 85 per cent of those surveyed said they preferred the temporal location, 15 per cent the 12 o’clock position, and 12 per cent the oblique area.

Three quarters of Japanese surgeons do not use antibiotics in the irrigating solution, which is similar in the US. Some 12 per cent of the American doctors use intracameral injected antibiotics and 56 per cent use lidocaine this way.

Low endophthalmitis rates in Japan

In Japan, the cases of endophthalmitis per 1,000 procedures has dropped from 0.45 to 0.28 in the last 10 years, meaning the incidence of the complication is 0.05 per cent. In the US, the incidence rate appears to be near two per 1,000 surgeries, and has been reported to be increasing. Japan has not had any TASS outbreaks in the last few years.

“I’ll say that international collaboration is very important, as we have much to learn from each other,” Dr Masket said.

Several Japanese ophthalmologists use antibiotic injections into the anterior chamber at the end of a cataract procedure because the antibiotic is not approved for direct use in the eye. They doubt that there is enough data on the side effects. In addition, some Japanese ophthalmologists are also worried about creating problems by using the wrong concentration and instead use the antibiotic in the irrigating solution, she said.

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