Henry “Jullundur” Smith’s “Extraction of Cataract in the Capsule”

A Landmark Article

James G. Ravin, MD

A century ago, the ARCHIVES published an important paper by Henry “Jullundur” Smith, MD (1859-1948), “Extraction of cataract in the capsule.” At that time, most cataract surgeons incised the anterior lens capsule and removed the nucleus, leaving the posterior capsule behind. Many complications were known to be less severe when the posterior capsule remained intact. Unfortunately, however, the capsule became opaque postoperatively in nearly every case of an immature cataract because there was no good method of removing cortical material from the posterior capsule.

When Hermann Knapp, MD (1832-1911), the editor of the ARCHIVES, accepted Smith’s article for publication, he wrote Smith, “If you can establish a safe method of intracapsular extraction of cataract, you will be a greater benefactor to mankind than Daviel.” Debatably, the most important date in the history of ophthalmic surgery is April 8, 1747, when Jacques Daviel (1696-1792) performed the first planned extracapsular cataract extraction. His operation was done in 4 steps: a corneal incision, an anterior capsulectomy, expression of the nucleus, and cortical removal using a curette. This process was a major improvement on the earlier method of couching the lens into the vitreous. On occasion, he would do an intracapsular extraction, if the whole lens happened to come out by expression. The credit for being the first to remove an intact cataractous lens through a corneal incision goes to another Frenchman, Charles de Saint-Yves (1667-1733). He removed at least one lens that had been traumatically displaced into the anterior chamber, possibly when faced with a failed couching procedure that left the cataract still blocking most of the pupil.

Smith said Knapp’s comment “was the first word of encouragement I had received from any ophthalmologist of standing.” More typical was the comment of the president of the ophthalmological section of the British Medical Association at its annual meeting in 1903: “I believe there is a deep-rooted opposition to this procedure.” The incidence of vitreous loss was just too high for most surgeons to be willing to undertake intracapsular surgery.

Henry Smith (Figure 1) was born in Ireland and educated at Queen’s College, Galway, and the Royal University of Ireland. He served for 30 years in the Indian Medical Service, mainly in Jullundur and Amritsar, and achieved the military rank of lieutenant colonel. He was not just an ophthalmic surgeon but also handled a wide variety of general surgical cases. Cataract patients came to his hospital in the spring and late fall, depending on the climate. He is remembered for being a fearless surgeon who worked and even operated while smoking a cigar (Figure 2). He once told a colleague, “If I have to lay down my cheroot, Harvey, it is a bad operation, and if my cheroot goes out, it is a damned bad operation.”

In 1905, Smith was by far the most experienced cataract surgeon the world had ever known. He had performed more than 11,000 procedures, 2000 by the orthodox extracapsular method and more than 9000 intracapsularly. (By 1921, he had done 50,000 cataract operations.) In his 1905 ARCHIVES article, Smith reported the results of 2616 intracapsular cases done between May 1904 and May 1905. His complications included 0.3% iritis, 6.8% vitre-
ous loss, and 8% capsular rupture. He considered only 0.34% of his cases failures. Smith felt the advantages of intracapsular surgery were the lack of an opaque capsule postoperatively, far less iritis, better visual acuity, fewer infections, and comparable rates of vitreous loss.

Smith used topical cocaine as anesthetia and stressed the importance of controlling the orbicularis oculi muscle to prevent the patient from squeezing. He would insert a speculum and make a “liberal-sized” knife incision superiorly. He then removed the speculum, and an assistant would elevate the upper lid with a strabismus hook and retract the lower lid with a thumb. Smith wrote, “I then place the curve of a strabismus hook over the cornea, about the junction of the lower with the middle third of the lens, and a spoon just above the upper lip of the wound. I press the strabismus hook down neither toward the wound nor from it, and do not alter its position until the lens is nearly out, all the time making slow, steady, and uninterrupted pressure and counterpressure.” He moved the hook forward to force the lens out of the incision. The whole operation took 2 to 3 minutes. If vitreous prolapsed, he would excise it with scissors.

The disadvantages of Smith’s procedure were the large incision required to remove the lens, capsular rupture during its delivery, corneal edema, vitreous loss, macular edema, and retinal detachment.

Based on Smith’s experience, for roughly the next 60 years cataract surgeons worldwide switched to removing the lens within its capsule. The next wave of technology, which brought improved visualization through operating microscopes and new methods of breaking up the lens, caused the return to extracapsular methods.

Submitted for Publication: January 26, 2004; final revision received June 9, 2004; accepted June 14, 2004.

Correspondence: James G. Ravin, MD, The Eye Center of Toledo, 3000 Regency Ct, Suite 100, Toledo, OH 43623-3081 (jamesravin@buckeye-express.com).

REFERENCES

6. Timberman A. New operation for extraction of cataract: Lt Col Henry Smith, IMS, and the environment in which he developed the technique of the intracapsular operation. Ohio State Med J. 1912; 8:241-250.