

# Recollections From 1967 and Beyond

A resident during the early days of IOL implants witnessed cataract surgery's evolution.

BY CHANDRAPPA S. RESHMI, MD

*Chandrappa Reshmi, MD, came to the US as an unknown from India. He had virtually no money, but he found a way to get the training that allowed him eventually to become a leading corneal surgeon in Pittsburgh and an internationally respected ophthalmologist.*

*Dr. Reshmi never forgot his native country, where he is considered a legend because of his enormous contributions to ophthalmology there. He is truly one of the most benevolent, charitable, and humble ophthalmologists.*

— Herve M. Byron, MD, Section Editor

July 1967 was an exciting time for me to be a resident in ophthalmology at New York Medical College, Flower and Fifth Avenue Hospitals, in New York. Earlier that year, Miles Galin, MD, and Herve Byron, MD, both from New York Medical College, and Marvin Kwitko, MD, from Jewish General Hospital in Montreal visited Cornelius Binkhorst, MD, in Sluiskil, the Netherlands, to learn more about his IOLs. They returned from their trip with deep convictions about the medical benefits of these implants after cataract surgery (Figure 1).

Drs. Galin and Byron introduced the routine use of Binkhorst IOLs at New York Medical College, and a revolutionary period in cataract surgery began. I was in the right place at the right time.

## EARLY SURGERY AND THE BINKHORST LENS

Early IOL surgery was performed with an approach of “one size fits all”: a +18.50D, four-loop IOL manufactured by Kurt Morcher of Stuttgart, Germany. Every week, Drs. Galin and Byron implanted six or more IOLs after intracapsular cataract extraction (ICCE). A few other surgeons in the department also started performing IOL surgery, but they stopped for reasons unknown to me. As Drs. Galin and Byron's assisting resident, I witnessed and participated in the earliest IOL implant surgery in the US.

Preoperatively, Dr. Galin's patients received 1% atropine eye drops every 15 minutes for four doses in order to dilate their pupils. They received no other medications. Local anesthesia was achieved using O'Brien and retrobulbar injections. The eyes underwent digital massage for 5 minutes to achieve hypotony. Dr. Galin used and taught the McLean technique for ICCE. In brief, this

technique used a limbus-based conjunctival flap superiorly, approximately 180° of partial-thickness groove at the limbus, and three preplaced 6-0 black silk sutures. The surgeon then entered the anterior chamber with a graffe knife section and performed two peripheral iridotomies. Using a lens capsule forceps, the surgeon removed the cataract by tumbling.

The Binkhorst iris clip IOL featured a PMMA optic and supramid haptics. The lens came in an ampule of 10% sodium hydroxide solution. It required neutralization with sodium bicarbonate solution and thorough rinsing with saline prior to its insertion into the anterior chamber. Dr. Galin would insert the IOL horizontally with a



Figure 1. In 1967, Miles Galin, MD; Herve Byron, MD; Marvin Kwitko, MD (pictured from left to right), and others visited Cornelius Binkhorst, MD (pictured at right), in the Netherlands to learn more about the IOL he had designed.

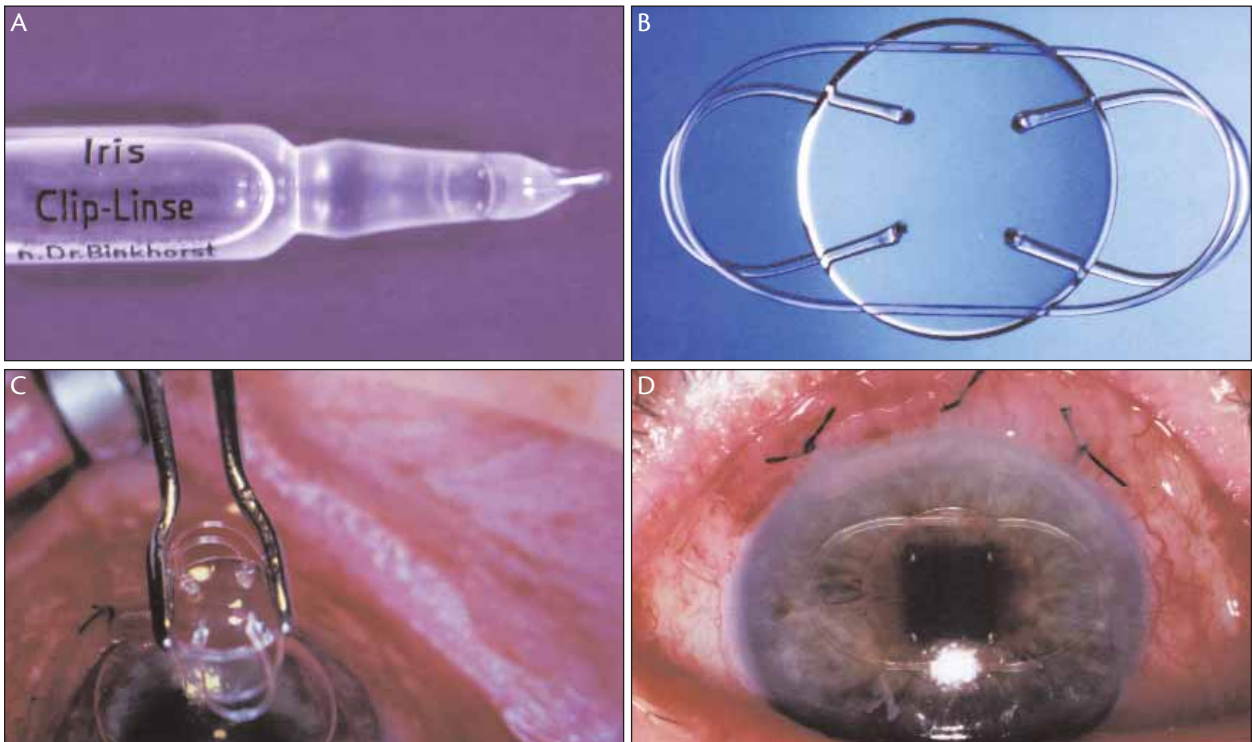


Figure 2. The Binkhorst IOL came in an ampule of 10% sodium hydroxide solution (A). The lens had a PMMA optic and supra-iridial haptics (B), and the surgeon inserted the IOL into the anterior chamber after ICCE (C). He closed the wound with three preplaced 6-0 black silk sutures (D).

Binkhorst lens forceps. He would place the posterior haptics behind the iris and the anterior haptics in front of the iris horizontally using the open sky technique. Introducing acetylcholine into the anterior chamber induced miosis. The preplaced sutures were tied, and the conjunctiva was closed with a few interrupted 6-0 black silk sutures. After instilling pilocarpine drops and applying Neodecadron sterile ophthalmic solution (Merck & Co., Inc., West Point, PA), he placed a patch and shield on the

eye. The entire procedure was performed without the aid of a microscope in 15 to 20 minutes.

Postoperatively, patients received pilocarpine and Neodecadron eye drops q.i.d. and Neodecadron ointment at bedtime. They also received Chloromycetin (Parke-Davis, Morris Plains, NJ) 250-mg capsules orally q.i.d. for 10 days. The conjunctival sutures were removed after 5 days, and the preplaced limbal sutures were removed after 3 weeks. Dr. Galin's patients were ambulatory immediately postop-



Figure 3. Herve Byron, MD, performed the first successful "triple procedure" in the world on March 12, 1968, at New York Medical College. Dr. Byron was assisted by Chandrappa Reshmi, MD.

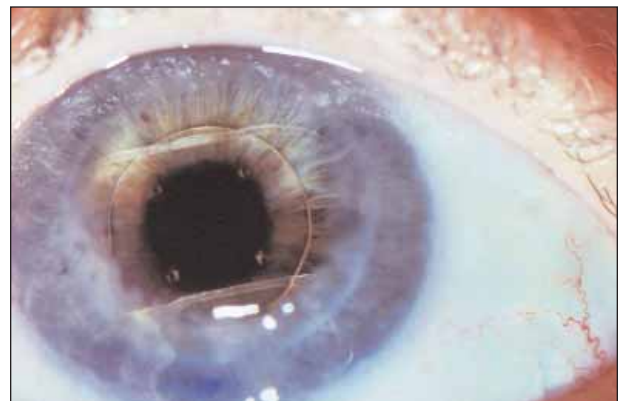


Figure 4. In 1975, the author performed the first "triple procedure" ever filmed in the world at the St. Francis Medical Center in Pittsburgh.

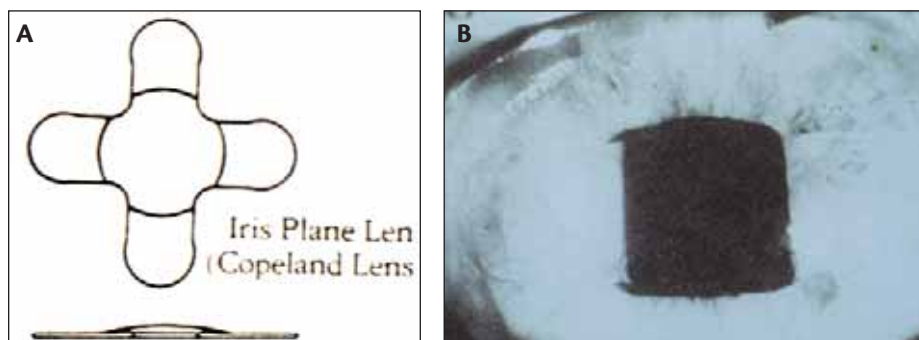


Figure 5. In 1968, the author was the first surgeon in the world to implant the Copeland IOL (A and B). At that time, he was a chief resident at New York Medical College.

eratively, and some were discharged on the day of their surgery (Figure 2).

### THE TRIPLE PROCEDURE

On March 12, 1968, I was the assisting resident when Dr. Byron performed the first successful “triple procedure” (a combined extracapsular cataract extraction, implantation of a Binkhorst two-loop IOL, and penetrating keratoplasty) in the US. This procedure was also performed without the aid of a microscope. Dr. Byron sutured an 8-mm donor corneal button with 8-0, interrupted, black, silk sutures. This graft remained crystal clear until the elderly patient’s death in 1970 (Figure 3).

In 1975, I performed my first successful triple procedure (ICCE, the implantation of a Binkhorst four-loop IOL, and penetrating keratoplasty) at St. Francis Medical Center in Pittsburgh. It was the first time the triple procedure was ever filmed. Later, this film was presented at various national and international conferences (Figure 4).

### THE COPELAND LENS

In 1968, Dr. Galin, Richard Binkhorst, MD (the brother of Dr. Cornelius Binkhorst), and Michael Copeland designed the Copeland iris-plane, all PMMA lens. Dr. Richard Binkhorst was a faculty member in the Department of Ophthalmology at New York Medical College. He was the first to implant the Copeland lens in his patients.

Having assisted Drs. Galin, Byron, Richard Binkhorst, and others with more than 200 IOL surgeries, I im-

planted my first IOL in 1968. It was a Copeland lens, and Dr. Richard Binkhorst was my preceptor. I am proud to state that I was the first resident in the world to implant the Copeland IOL during training (Figure 5).

Postoperatively, my patient’s visual acuity improved to 20/30, and I was ecstatic. As it happened, Dr. Cornelius

Binkhorst was visiting Dr. Galin at New York Medical College, and I invited him to see my patient. Quite graciously, he obliged and afterward asked me why I had not used his lens. I responded, “Your brother, Richard, wanted me to try the newly designed Copeland lens since he was one of the brains behind it.” It appeared to be a classic case of Binkhorst versus Binkhorst.

### THE FYODOROV SPUTNIK LENS

In 1968, Dr. Galin traveled to Moscow to learn about the Sputnik lens designed by Russian pioneer Svyatoslav Fyodorov, MD. After his return, Dr. Galin introduced both Dr. Fyodorov and his IOL to the US (Figure 6).

### TRIBULATIONS

The euphoria inside the Department of Ophthalmology at New York Medical College was overflowing, but there was enormous opposition to IOL surgery in the ophthalmic community at large. Instead of constructive criticism, outright condemnation and public, derogatory remarks about the practitioners of IOL implant surgery were common. Comments such as “some eye surgeons are mas-

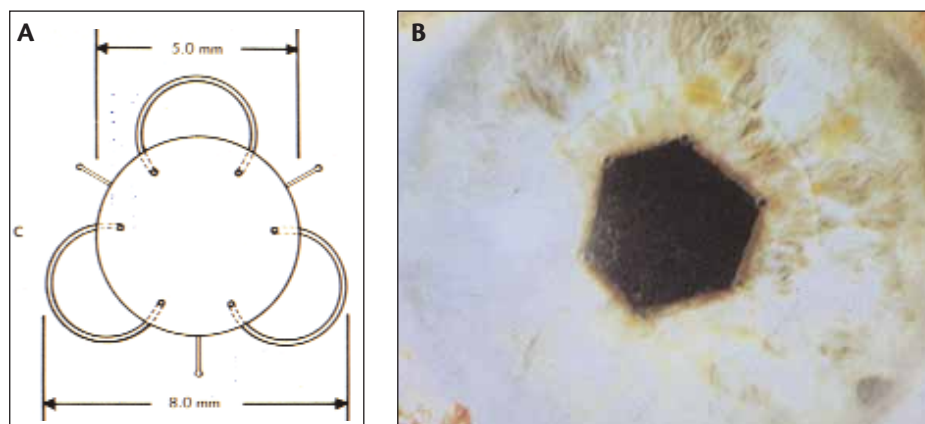


Figure 6. Miles Galin, MD, introduced the Fyodorov Sputnik lens to the US at the New York Medical College (A and B).

sacring eyes” were not infrequent at professional meetings and in ophthalmic journals.

At the time, there was no lens of the month, technique of the week, named instrument of the day, ultrasound biometry, pachymetry, specular microscopy, ophthalmic microscope, phacoemulsification, Nd:YAG laser, viscoelastic agent, small or clear corneal incisions, sutureless cataract surgery, or managed care. There were no eye MDs, just MDs. Above all, there was no intervention by the FDA or Y2K bill reducing physicians’ reimbursement.

### TRIUMPH

In the late 1960s, only a few eye surgeons routinely performed IOL surgery in the US. As time passed, both the technique and technology improved tremendously. Yesteryear’s bitter opponents became enthusiastic proponents, and the IOL has become a boon for cataract patients rather than the time bomb it had been dubbed by a well-respected ophthalmic surgeon. The conviction of several pioneers made an amazing difference. Those were the days, my friends! ■

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