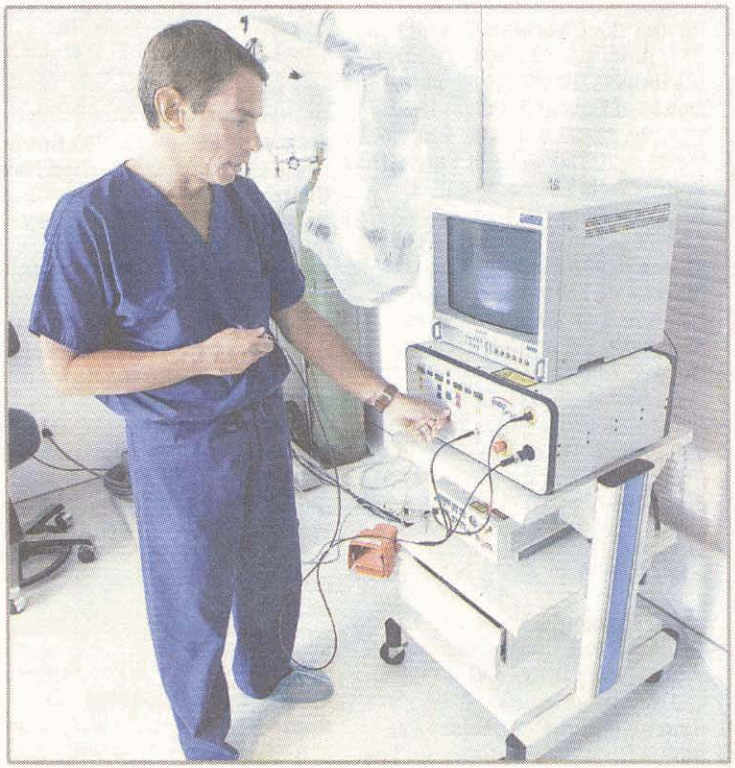
# Seeing the light

## *When Dr. Martin Uram saw the need for a better device to treat his patients' glaucoma, he invented one himself*



**Dr. Martin Uram, an ophthalmologist and retinal surgeon with offices in Little Silver and Toms River, demonstrates (top) his Endo Optiks Uram E2. The instrument, with its minute yet powerful light combined with imaging capabilities and a laser, was invented by Uram to give patients improved options for glaucoma treatment. He is seen (above) with the complete equipment.** (STAFF PHOTOS: MICHAEL SYPNIEWSKI)

**By MICHAEL RILEY**
STAFF WRITER

Leonard M. Rosenfeld is a retired professor at Jefferson Medical College in Philadelphia who lives in Rydal, Pa.

Since 1981, he has had to cope with glaucoma, what he calls "a strange malady."

He understands that glaucoma is one of those diseases where the best you can usually hope for is to arrest the condition before it robs you, quite literally, blind.

In the course of his treatment, Rosenfeld has undergone some 10 operations, with varying degrees of success.

Recently, his doctor recommended that he visit Dr. Martin Uram, who, Rosenfeld was told, had "a novel approach" for treating glaucoma.

One June 22, Rosenfeld availed himself of that novel approach, and "so far, so good," he says.

"Dr. Uram is pleased with the progress so far," Rosenfeld says. "And if he's pleased, I'm pleased."

Uram, with offices in Little Silver and Toms River, holds in his hand the thing he invented to help patients like Rosenfeld. Frankly, it looks like something you'd pick up at Radio Shack to fix your home entertainment center.

But what the doctor who specializes in retinal disorders has developed is an instrument and a process that can often treat the

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*— Leonard M. Rosenfeld, Rydal, Pa., a retired professor and patient of Dr. Martin Uram, Little Silver*

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# Glaucoma

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most intractable cases of glaucoma, especially in glaucoma patients who also need cataracts removed.

Endoscopic cyclophotocoagulation (ECP) is the name of the procedure, made possible by the device Uram invented, which uses fiber optics in a device that combines light, imaging capabilities that can project a view of the eye's interior onto a monitor, and a laser in a single hand-held instrument. This, according to Uram, is something that just wasn't available before.

Put simply, ECP uses the laser to coagulate part of the fluid producing too much pressure in the eye.

Uram, who lives in Middletown, is one of those doctors who has no problem explaining complex medical and anatomical problems in ways that lay people can understand. To understand what his device is and what it can do, Uram says, you first need to know what glaucoma is.

Although there are many types of glaucoma, the disease is essentially a plumbing problem: Fluid builds up in the eye, causing pressure on the optic nerve, resulting in loss of vision and possible blindness.

"With the fluid pressure, there are two ways to go about fixing the problem: output solutions and input solutions," says Uram. In other words, doctors have to find a way either for the fluid to leave — output; or to control its entry into the eye — input.

"The first line of defense for glaucoma patients is eye drops," Uram says. "That works well for most people. But it can get expensive. Some people have to take three different kinds of drop every day and the cost can reach $400 a month." And sometimes, he adds, getting patients to comply with the regimen of drops can be difficult.

One of the benefits of Uram's procedure is that patients can often radically reduce the amount of eye drops they use.

In more difficult cases of glaucoma, surgery is called for: either an outflow procedure where a hole is made and a tube is inserted to increase outflow, or laser surgery on what is called the "ciliary body" that produces the fluid, in order to control the input.

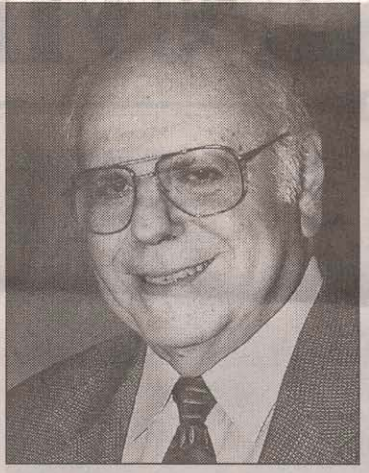
The trouble with operating on the ciliary body is that doctors cannot see it clearly.

"It's in the back of the eye and hard to see," Uram says.

Doctors had to work blind, so to speak, and that added to the pain of the operation.

"It could be brutal," says Uram.

The operation was itself, in Uram's words, "fraught with complications" and required intense post-operative care. Not to mention that the failure rate for the operation was fairly high, which meant that patients often had to undergo the operation repeatedly, all the while losing vision.



**Leonard M. Rosenfeld, a patient of Dr. Martin Uram.**

That was the situation that faced Uram more than a decade ago when he began to ponder this problem.

Arthroscopic surgery was coming into its own at that time, Uram says, with the use of fiber optics to assist doctors in performing surgeries without large incisions.

"Why can't that technology be applied to glaucoma surgery?" is the question that Uram asked himself one day.

The answer was, of course, that the instruments needed to operate on the eye would have to be a lot smaller than an endoscope designed for, say, knee surgery.

And, again, a question occurred to the doctor.

"Why can't such a device be made?" he asked.

And so he began to explore the possibilities and he developed a device.

Of course, as Uram was reminded, you can't just invent a medical device, get a patent for it and go off, willy-nilly, using it on patients.

Approval from the Food and Drug Administration takes time.

In Uram's case, that approval came in 1992.

"I'm a doctor, not a manufacturer, and certainly not a salesman," Uram says.

But, in fact, he's had to become all three.

Uram started a company, Endo Optiks, housed on the first floor of his Little Silver office. There, one sees the devices in various states of manufacture.

He also has traveled around the country and around the world, discussing the advantages of the device at scientific conventions.

It has taken more than 10 years to gain wide-spread acceptance for his device and his procedure.

But that acceptance is coming. "There are now over 1,000 ophthalmologists in 22 countries using this procedure and the number is growing exponentially," Uram says.

Alphonse Annone, 73, of Manasquan didn't have much time to ponder the novelty of the procedure when he had it done about six years ago.

"I went to my regular eye doctor and he found that my eye pressure was way out of whack," Annone says. "He sent me to Dr. Uram and he did the procedure the very next day. Since then, my pressures have been good. I can tell you that I'm glad the doctor didn't make me wait a week so I had time to worry about an operation on my eye."

Annone says he had no idea that Uram invented the procedure.

"He never said a word about that," Annone says.

Must be modest, he added.