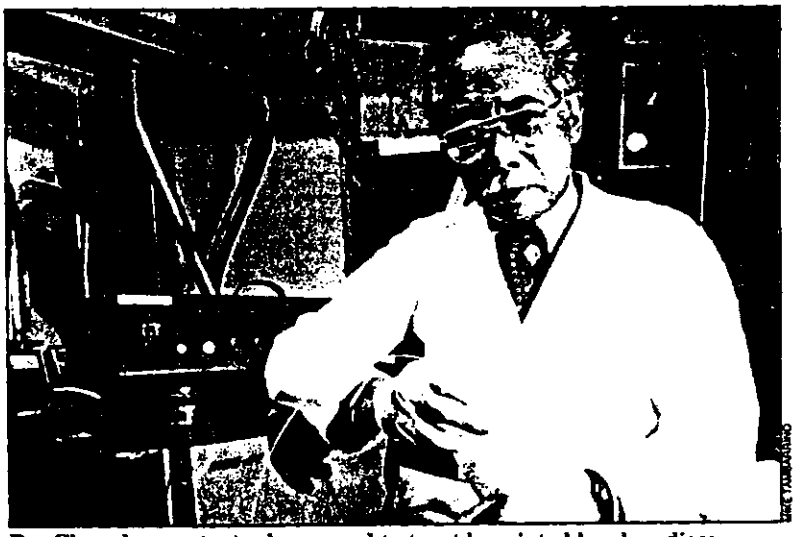
Disc treated with laser

By P.J. Skerrett

An outpatient laser procedure that reduces pressure inside herniated lumbar discs may simplify treatment of lower back pain, two New York doctors report.

The technique, called percutaneous laser disc decompression (PLDC), has been performed on more than 500 people with a high success rate and only a single complication, according to its inventor, Daniel S. Choy, M.D., of St. Luke's-Roosevelt Hospital Center, Columbia University, New York City, N.Y.

Dr. Choy and his colleague, Souheil Saddekni, M.D., have used laser decompression 90 times in 65 patients. Follow-ups over two-and-one-half years (mean, 11 months) show that the procedure relieved pain roughly 80% of the time. In no case was any paralysis detected, nor did the procedure make the problem worse, said Dr. Choy. MRI scans taken weeks after the laser decompression showed shrinkage of the herniation in one-third of the patients. The data have been submitted for publication, Dr. Choy said, adding that similar results have been reported by teams using the technique in Austria and Germany.



Dr. Choy demonstrates laser used to treat herniated lumbar discs.

Patients return to work in three days

According to Dr. Choy, some patients treated with PLDC show marked improvement immediately after the procedure; a return of an absent ankle reflex or more flexibility on a straight-leg raising test is often observed, he said. All patients are able to walk out of the hospital right away, and many return to work in three days or less, he added.

During the procedure, an 18-gauge needle is inserted into a patient's herniated disc, guided by fluoroscopic imaging. An optic fiber which will carry the laser light is threaded through the needle so the tip is in contact with disc material. The YAG laser is turned on and emits one-second pulses of light, separated by pauses of a few seconds, as the fiber is advanced 1cm further into the disc.

"Percutaneous laser disc decompression is a relatively non-invasive procedure that is effective and economically cost-effective," said Dr. Choy. The procedure costs about one-third less than open surgery, he said.

Open microdissection of a herniated disc remains the "gold standard" for this problem, said Augustus A. White III, M.D., orthopedic surgeon-in-chief at Beth Israel Hospital in Boston. Surgery relieves pain in more than 90% of all patients, most of whom are out of the hospital in two to three days. But he added that non-invasive techniques provide "a reasonable alternative to open surgery, with fewer risks."

Dissolving discs with the enzyme chymopapain has fallen out of favor in the United States following reports of leakage into surrounding areas and allergic reactions. Percutaneous dissection using a suction nucleotome is being used in the U.S., with success rates reported anywhere from 60% to 90%, Dr. White said.

According to Dr. Choy, a YAG laser costs about $75,000. Some private practices can afford this sort of expense, he said. But many hospitals today have YAG lasers, which are in widespread use for a number of gynecologic and lung treatments.

Although the procedure is still experimental, Blue Cross/Blue Shield and other private insurers reimburse for it, Dr. Choy said.