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Investigators at Stanford University School of Medicine and the Palo Alto Medical Research Foundation have used a laser photocoagulator to treat 25 patients with a variety of retinal diseases.

Reporting these results today at the annual convention of the American Medical Association in San Francisco, Dr. Milton Flocks and Dr. H. Christian Zweng said:

"Laser energy has been used for photocoagulation of ocular tissues in animals and man. It has unique properties which promise to extend its usefulness. It is still, however, in the experimental stage."

Dr. Flocks and Dr. Zweng are practicing ophthalmologists in Palo Alto. They carried on the research work with the laser photocoagulator under U.S. Public Health Service grants to the Palo Alto Medical Research Foundation and Stanford University School of Medicine. Both physicians are Foundation research associates and members of the clinical faculty at Stanford Medical School.

The investigators used an experimental laser coagulator developed in association with Dr. Narinder S. Kapany, Norman Peppers and Norman Silbertrust of Optics Technology, Inc., at Belmont, Calif. The device consists of an ophthalmoscope with a hand-held ruby laser which fires powerful bursts of light of short duration (500 microseconds).

When aimed at the eye, the intense laser light will pass through transparent tissue and liquid and can be used to treat retinal defects.

laser 222

The light beam has been particularly effective for prevention of retinal detachment. In cases in which holes or tears appear in the retina they can be "spot welded" back in place by the light beam before a retinal detachment takes place.

Before its application on humans, the laser coagulator had been extensively tested on rabbits, cats and monkeys in the Stanford Division of Ophthalmology, the physicians said.

Of the patients treated, 23 had retinal photocoagulation and two had iris photocoagulation. All but one patient were treated as outpatients. Except for heavy work they were allowed to resume normal activities after treatment.

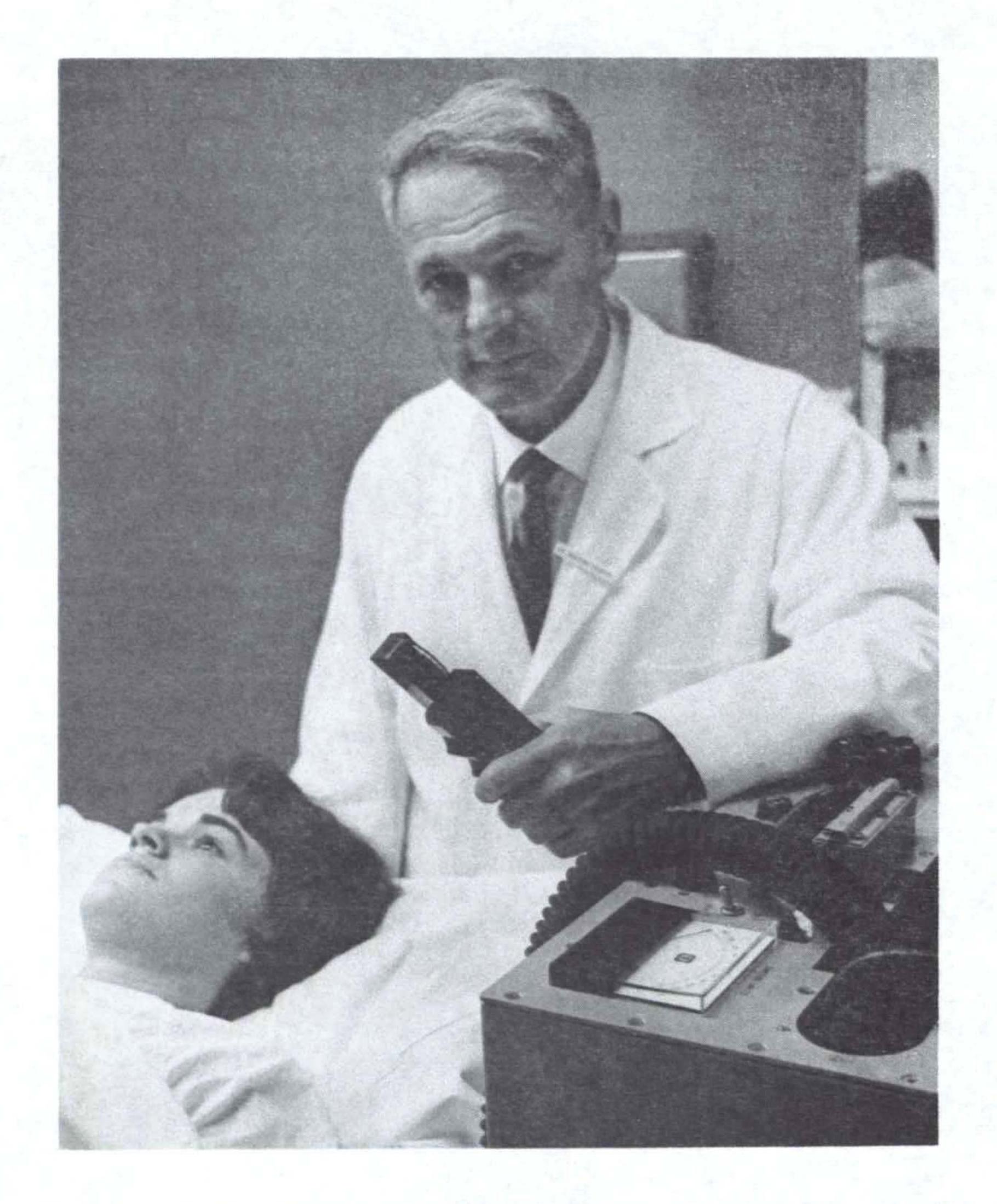
The patients directed their gaze in the position which offered the ophthalmologist the best view of the area to be treated. The area was then treated with multiple exposures to the laser. No anesthesia was needed. The eyes were not patched after treatment.

"The patients experienced remarkably little discomfort," the investigators said. "The flash of light occurred so rapidly they were hardly aware of it.

Some stated they were bothered by the slight 'popping' noise of the laser burst more than the light."

The physicians reported that in the patients who have been treated no major complications have been encountered during the past nine months. However, they added, "the patients are too few, and the follow-up too short to be certain that laser coagulation will prove to be good enough to be used in preference to other modes of therapy."

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Dr. Milton Flocks, Palo Alto ophthalmologist and member of the clinical faculty at Stanford Medical School, prepares to begin laser photocoagulation treatment on a patient. Dr. Flocks and Dr. H. Christian Zweng, also a Palo Alto ophthalmologist, told the American Medical Association convention in San Francisco that laser energy used for treatment of retinal diseases has unique properties which promise to extend its usefulness.