Glaucoma Patients Show Marked Relief With Valve Implant

A vast improvement in the treatment of neovascular glaucoma has resulted through the use of a tiny, plastic valve implant designed by Theodore Krupin, MD, associate professor of ophthalmology at the WU School of Medicine.

The valve works by draining fluid from the front chamber of the eye where a buildup in pressure can impair vision and eventually cause blindness. Fluid buildup in the eye is a frequent complication of diabetes.

Until recently, the standard operation to relieve this pressure, a trabeculectomy, offered neovascular glaucoma patients less than a five percent chance of success. But Krupin's valve has shown a striking 68 percent success rate.

Approximately one-fourth-inch long, the valve consists of an open-ended tube with side-arms. The open end is inserted in the front chamber of the eye where fluid is trapped, and the closed valve end in a pocketed area created during the operation in the sclera (the tough tissue covering the white of the eye). When pressure exceeds the desired level, slits in the closed valve end of the tube open to release fluid to the pocketed area where it is then absorbed.

Heralded as a breakthrough by others in the field, Krupin's valve can be implanted in 30 minutes under local anesthesia. It is well tolerated by patients with most failures resulting from scarring of tissue into which the valve drains.

Six medical centers throughout the U.S., including the Washington University Medical Center, now use the valve, which also has been beneficial to patients with other forms of glaucoma after traditional methods failed.

School of Social Work Offers Spring Series in Human Services

One-, two- and three-day workshops and seminars on topics of interest to practitioners and students in mental health, corrections, education, health care and lay and pastoral counseling will be offered this spring by the Continuing Education Program for Human Service Personnel of the George Warren Brown School of Social Work at WU. The twelve workshops will address topics such as short-term therapy and crisis intervention techniques, the use of videotape in the treatment setting, and agency management and planning.

Registration is under way in Room B-9 (basement) of Brown Hall, weekdays from 8:30 a.m. to 5 p.m. To request a brochure on the program or to enroll by credit card, call Ext. 6636 or write to Campus Box 1196.

Joel Bergman, a member of the senior faculty of the Ackerman Institute for Family Therapy in New York City, will open the Distinguished Lecture Series with a two-day workshop Feb. 22 and 23 on "Techniques for Brief Family Therapy." Techniques will be illustrated with videotaped interviews with families.

Other lecturers and topics in the series are: Clifford J. Sager, MD, clinical professor of psychiatry at the WU School of Medicine, continues "Techniques for Brief Family Therapy." Techniques will be illustrated with taped interviews with families.

Procedures Developed at WU Improve Prize-Winning CAT Scan

In 1972, British engineer Godfrey N. Hounsfield demonstrated a revolutionary X-ray technique that gives doctors a clear look at cross section “slices” of the human body. The technique, known as computed axial tomography, or the CAT scan, hit the world of medical diagnosis with an explosive impact. It consequently earned Hounsfield and American physicist Allan M. Cormack the 1979 Nobel Prize in Medicine.

Among those who contributed some of the first refinements to the CAT scan in the years following its introduction were several WU scientists.

Efforts began immediately after Michel M. Ter-Pogossian, MD, head of the Division of Radiation Sciences at the WU School of Medicine, discussed Hounsfield's accomplishments with Jerome R. Cox, Jr., WU professor and department chairman of computer science, and Donald L. Snyder, WU professor and department chairman of electrical engineering.

"Hounsfield was the one who had faith in this remarkable marriage of radiology and computer technology and saw it through. The world was astonished when he first presented his ideas. Once he did, many people began to work on better ways to do the job," recalled Cox.

In the next few years, Cox and Snyder developed several mathematical algorithms or conceptual procedures for the reconstruction of body images. These algorithms helped...
It was almost like seeing triple for a TV crew from the St. Louis KSDK Newsbeat team, an NBC affiliate. Newsbeat producer Steve Kraushaar came to the WU School of Dental Medicine recently to interview three sisters, all of them dental students. From left they are, Lisa, a second level student, Laura, a graduate student in orthodontics, and Leigh Schneidt, first level. (Photo by Steve Amsden)

Scan—continued from p. 1

simplify the millions of arithmetic operations involved, reduced computing time and led to new scanner ideas that later were patented and licensed to the Picker Corp., one of the world's largest X-ray equipment manufacturers.

Hounsfild's invention spurred other researchers to make similar finds. "The stage was set," said Cox. "There was a tremendous bubbling and frothing. Everyone was working independently and in great secrecy."

The improved mathematical techniques developed by Cox and Snyder were made public in April 1975 at an international tomography conference in Puerto Rico, organized by Ter-Pogossian. These techniques led to a collaboration with scientists at the WU Mallinckrodt Institute of Radiology.

"It was a success story on both sides," explained Snyder. At the time, Ter-Pogossian and his colleagues at the Mallinckrodt Institute of Radiology were working on a major new project called the PETT scan (positron emission transaxial tomography). In contrast to the CAT scan, which provides a look inside the body by means of X-ray images taken from many points of view, the PETT system uses radioactive isotopes introduced into the blood stream. As the radioactive material courses through the body, it is detected externally and converted into images. Despite the operational differences, the computer processing is virtually the same for both systems.

"Ter-Pogossian and his group played a significant role in making us aware of the mathematical problem and keeping us in touch with its practical aspects," said Snyder, who continues to work with the Institute and the WU Biomedical Computer Laboratory toward further development of the PETT system.

Meanwhile, Hounsfild visits St. Louis frequently to confer with WU researchers on further clinical applications of his CAT scan. According to Ronald G. Evens, MD, director of the Mallinckrodt Institute, Hounsfild's whole body scanner was adapted for clinical use here where the machines were developed for use throughout the world.

Edward J. Imwinkelried
courtroom and has taught a law school course on that subject.

"There has been a tremendous interest in scientific evidence ever since the Law Enforcement Assistance Administration (LEAA) began some five years ago to fund research programs in the scientific evidence area," Imwinkelried said. "On the one hand, the courts are liberalizing the standards for admitting scientific evidence. On the other hand, a recent LEAA survey disclosed a shocking high rate of error in analysis by crime laboratories," he said.

The professor has lectured on scientific evidence in 16 states for the National College of District Attorneys (Houston, Tex.). He is presently preparing a videotape on scientific evidence for the College.

He also has lectured on scientific evidence for the Practicing Law Institute in New York City. He is editing a revised edition of the Institute's text, Scientific and Expert Evidence in Criminal Advocacy.

"I am gathering articles from scientists throughout the country, and I hope to compile the material into a two-volume treatise to be published in mid-1980," he said. "The treatise will both survey the current state of the forensic art and give the reader a sense of where the art may go within the next five years.

Techniques which Imwinkelried believes will become common practice in collecting forensic evidence are lifting fingerprints from human skin and a greater use of a new scanning electron microscope which produces magnifications 100 times more powerful than the ordinary optical microscope. "Another new technique, trace metal detection, will show that someone has recently held a weapon," he said.

Imwinkelried, who joined the WU law faculty last July, has not had any formal training in forensic science. "My interest began when I was on active duty in the Army," he said. "I worked with a professor who had a master's degree in forensic science. We developed a course for the Army Law School at the University of Virginia."

Admission of forensic evidence depends on the type of case, Imwinkelried said.

"Forensic evidence sometimes is not used in cases where there is direct, eyewitness testimony to the crime," he pointed out. "However, heavy reliance is placed on forensic evidence in circumstantial evidence cases."

"Scientific evidence is playing a growing role in the courtroom," Imwinkelried said. "That's one reason why it's critical to expose law students to it."

Nursery School Is Accepting Applications for Fall 1980

Applications may be made through February to enroll pre-school children in the WU Nursery School for Sept. 1980. Members of the WU community who are interested should call Nursery School director Maya Zuck at Ext. 6689. The Nursery School, located in the northeast wing of the Faculty Apartments Building on Millbrook Blvd., is a daytime learning program for three- to five-year-old children of WU faculty, staff and students and from the St. Louis community.
Facult y Notes

Raymond E. Arvidson, WU associate professor of earth and planetary sciences and director of the NASA Regional Planetary Image Facility here, has been appointed to the Committee on Computation and Data Management of the National Academy of Sciences. The committee will work under the Academy’s Space Science Board, recommending better uses for earth and space science data through new developments in computer technology.

Lucius J. Barker, WU Edna Fischel Gellhorn University Professor of Public Affairs and professor of political science, has been elected a vice president of the American Political Science Association for 1980 to 1981.

Haack Died Nov. 28

Arno J. Haack, WU dean of students for 16 years and a distinguished member of the University community for nearly four decades, died Nov. 28, 1979, in St. Louis of a heart ailment at age 76.

Haack, a 1925 graduate of the University of Wisconsin, was named executive secretary of the WU YMCA-YWCA in 1930, a position he held until his appointment as dean of men in Feb. 1948. He was named dean of students in 1949. In 1965, he became dean of the WU International Office and, upon his retirement from the University in 1969, Haack became president of the International Institute, 4475 W. Pine.

Haack was a longtime resident of Webster Groves, Mo. Surviving are his wife, Florence, and three sons.

Host of Workshops Offer End to Winter Blahs

With the holidays a memory and spring break only a promise (it will blow in on early March winds the week of the ninth), ’tis time to mix study with some imaginative workshops geared for “academic survival, career planning, and individual growth.”

Offered by the friendly folk in Karl Umrah Hall, specifically, Special Educational Services (SES), Career Planning and Placement Service (CPPS), and Student Counseling Service (SCS), the topics are listed below. For definitive information on whether it is necessary to preregister, and for exact dates, times, and locations, call the following numbers: SES, Ext. 5970; CPPS, Ext. 9390; and SCS, Ext. 5980.

Topics of workshops offered by SES include: coping with exams, LSAT preparation, memory improvement, public speaking, rapid reading and term paper writing.

CPPS offerings cover: career development, job hunting and interviewing skills, business opportunities for liberal arts majors, planning a summer experience and resume writing.

SCS offers workshops in areas such as: assertion training, adjusting to life after college, dream analysis, sexuality, dealing with academic pressures, how to improve social and study skills, how to survive a loss, relaxation training and time management.

Karen Holm Named Assistant Counsel

St. Louis attorney Karen Holm has been appointed assistant general counsel for WU, Peter H. Ruger, general counsel, announced recently.

Holm has been associated with the St. Louis law firm of Peper, Martin, Jensen, Maichel and Hetlage. Formerly, she served as law clerk for Chief Judge M. C. Matthes of the United States Court of Appeals for the Eighth Circuit. She has also been a lecturer at the WU School of Law.

Issues in human services management will be discussed in three workshops in the management training component of the program. Workshops and the dates on which they will be held are: “Social Work Supervision: Enhancing Practitioner Competency,” which will meet on six Wednesday evenings, March 5 through April 9; “Time: How to Manage It,” a day-long workshop April 2; and “Program Planning for Human Service Agencies: A Practical Approach,” another day-long seminar scheduled for May 1.

Fees for the workshops range from $10 to $97.50 for practitioners and $10 to $82.50 for students. All workshops will be held on the WU campus.

Participation in workshops and seminars carry continuing education units of credit.

The WU Record is published weekly during the academic year by the Information Office. Editor: Charlotte Boman. Address all communications to Box 1142.

Christine Ivelich (right) and Robert Post of the St. Louis Soma Theatre will be among the St. Louis mime artists who will perform in the St. Louis Mime Festival Feb. 8 and 9 in Edison Theatre. For ticket information, call Ext. 6543.
Glasses," George A. Ferguson, director, Nuclear Engineering Program, and additional interfaith discussions Feb. 6, 4 p.m. in the Women's Bldg. Lounge and at 7 p.m. in Lambert Lounge, Mallinckrodt Center; Feb. 7, at the Newman Center, 6352 Forsyth, and at Hillel, 6300 Forsyth, both at 4 p.m.; and also at 7 p.m. that evening in Lambert Lounge.

SATURDAY, FEB. 2
9 p.m. Tarbut: A Celebration of the Jewish Arts. "Music Jam/Coffeehouse," with Bill Caspary, folk fiddler and WU assoc. prof. of political science; Edward Fogel, cantor, Shaare Emeth Temple, St. Louis; Heshemesh, an instrumental ensemble specializing in Israeli folk music, and others. Hillel House, 6300 Forsyth.

SUNDAY, FEB. 3

TUESDAY, FEB. 5
4 p.m. Department of Mechanical Engineering and Graduate and Professional Opportunities Program Lecture, "Diffraction Evidence for Ordering in Silica and Germania Glasses," George A. Ferguson, director, Nuclear Engineering Program, Howard U. 100 Cupples II.

WEDNESDAY, FEB. 6
11 a.m. Council for Inter-Religious Concerns (CIRCuIt) and Assembly Series Lecture, "A Passionate God," Rosemary Haughton, noted Catholic author, lecturer and theologian. Graham Chapel. (There will be a discussion with the lecturer at 2 p.m. in the Ann Whitney Olin Women's Building Lounge; and additional interfaith discussions Feb. 6, 4 p.m. in the Women's Bldg. Lounge and at 7 p.m. in Lambert Lounge, Mallinckrodt Center; Feb. 7, at the Newman Center, 6352 Forsyth, and at Hillel, 6300 Forsyth, both at 4 p.m.; and also at 7 p.m. that evening in Lambert Lounge.

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