

AGING WELL

Physician battles skin cancer with microsurgery

Chester dermatologist getting to the root of deadly malady

By PATTI MENGERS

Of the Times Staff

CHESTER - Thirty years ago, they toiled freely under Old Sol or soaked up the sun as they basked on the beaches. Their skin, brown as berries or lobster red, reflected the lack of protection from ultraviolet rays.

Today they are the typical patients of Dr. Arthur K. Balin, a dermatologist whose clientele consists mainly of skin cancer patients. Most of them are older adults whose cancer was triggered by the sun 25 to 35 years ago.

"Skin cancer is primarily on the face, secondly on the hands, arms and back," said Balin who has actually removed it from all areas of the body.

On a daily basis in his Chester office, Balin removes cancerous cells from his patients through a type of microscopic surgery that only about 230 doctors in the world are certified to perform.

He is trained in Mohs microscopic surgery, a technique pioneered by Dr. Frederic E. Mohs of Madison, Wis. Unlike conventional skin cancer surgery, Mohs surgery involves the removal of thin, horizontal layers of skin which enables the doctor to detect cancer roots under the microscope.

"If you take it out with conventional surgery, you have to take out the cancer that you see and you have to take out an extra amount in order to account for the roots," said Balin. "We call it a 'margin of normal tissue.'"

When the lab gets the diseased tissue in conventional surgery, it is sliced in a vertical fashion which limits the doctor's scrutiny of cancer roots to the length and location of the slice. If the roots extend beyond that slice, then the doctor misses cancer that is still present, said Balin.

With Mohs surgery, a horizontal layer of the skin is examined so that the cells still on the rim are evident under the microscope.

"The real concept is that you look at the margin of all the tissue that's taken out - the whole outside rim," said Balin. "It doesn't make sense not to do it. Something could sneak through the area that you didn't see (with conventional surgery)."

The Chester doctor uses Mohs surgery primarily on basal and squamous cell carcinoma, the type of skin cancer that is diagnosed in about 600,000 Americans a year.

"It has the highest cure rate



DR. ARTHUR BALIN

and is the most tissue-sparing," said Balin, who noted that areas of greater cosmetic importance require greater sparing of tissue. "If you're dealing with the nose, it's more important. If you're dealing with the back, it's less important."

There is a debate over the value of Mohs surgery in removing melanoma, the type of skin cancer that is diagnosed in about 27,000 Americans a year and which can travel through the circulatory system.

Other forms of skin cancer treatment include burning it off or freezing and thawing it. Both involve removing only the evident cancer without knowing if roots remain, said Balin.

Skin cancer can also be removed through radiation, but that too, is risky, he said.

"Radiation causes cancer and also cures cancer," said Balin. "It normally takes a number of

years for cancer to develop after exposure to radiation."

One of the latest forms of treatment for basal cell carcinoma is experitherapy in which Interferon is used to stimulate the immune system, said Balin. While it has an eight in 10 cure rate, it is still awaiting approval by the U.S. Food and Drug Administration.

Balin had such high regard for Mohs surgery with its 99 percent cure rate, that, after running an aging laboratory at The Rockefeller University in New York for nine years, he went back into training to learn the technique. For a year, he commuted between Texas and Delaware County, maintaining his practice at his Chester office on weekends.

The 43-year old Nether Providence resident was trained in Mohs surgery by Dr. Willis Cotter at the Sammons Cancer Center at Baylor Medical Center in Dallas, Texas.

Mohs developed his skin cancer surgery in 1932 while still a medical resident. He first developed a fixed tissue technique which involves fixing or destroying the cancer cells on the skin with zinc chloride paste, before examining them under the microscope. In 1970, the fresh tissue technique was perfected which involves the removal of living cells.

A Delaware County woman who is now Balin's patient survived skin cancer after having Mohs surgery on her entire

scalp 20 years ago, said the doctor.

"There's one disadvantage of Mohs surgery - it takes longer than regular surgery, but with old surgery, you take a bigger layer," said Balin, who noted the average Mohs layer is one or two millimeters thick. "The thickness of the layer depends on where you are (on the body)."

He said the layer can be as thin as piece of Saran Wrap. In cases where the cancer has tunneled along the nerve deeper into the skin, said Ballin, so many layers have been taken off that heart muscle and skull have been exposed.

"It takes 10 minutes or so to take off a layer and two hours to process tissue to see if there's a root," explained Balin. "The person must be available for the whole day (for removal of additional layers). People go home and I sew them up at the end of the day. One patient even went to his office."

After the layers is removed, the doctor color-codes the tissue and creates a map so he knows exactly where on the skin the cancer root can be traced. After a technician slices the horizontal layer, the doctor examines the tissue under a microscope.

"When you look at tissue in a vertical orientation and you look at tissue in a horizontal orientation, it looks different," said Balin who has been a dermatopathologist, a doctor trained in identifying diseased tissue, since 1981.