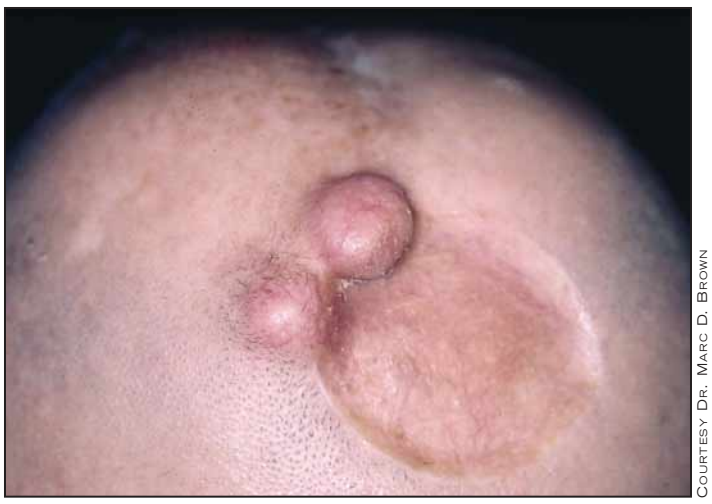
Skin Cancer Risk Rises After Organ Transplant

BY DAMIAN McNAMARA
Miami Bureau

KEY BISCAYNE, FLA. — With the growing number of organ transplant recipients living longer, it has become increasingly important to treat and counsel these patients about their significantly higher risk of skin cancers, according to a presentation at the annual meeting of the Noah Worcester Dermatological Society.



COURTESY DR. MARC D. BROWN

These skin lesions emerged on the back of a patient's head next to a scar left after surgery to remove a previous cancer.

Mucocutaneous lesions are the most common cancer type among organ transplant patients. The risk may be highest for squamous cell carcinoma, but it is also elevated for rare cancer types. In addition, skin cancers tend to be more aggressive and carry a worse prognosis for organ recipients.

Greater patient education is warranted. The International Transplant Skin Cancer Collaborative (www.itscc.org) recommends increased prevention efforts.

There are more than 150,000 living organ transplant recipients. It is likely that 70% of these patients will eventually develop skin cancer, according to Marc D. Brown, M.D., professor of dermatology, University of Rochester (N.Y.).

An estimated 37% of tumors are mucocutaneous. Patients also develop lymphoma (17%), lung cancer (6%), and Kaposi's sarcoma, uterine, and colorectal cancers (4% each). Skin cancer can include squamous cell carcinoma, basal cell carcinoma, melanoma, sarcoma, Merkel cell carcinoma, angiosarcoma, verrucous carcinoma, atypical fibroxanthoma, and leiomyosarcoma.

There is a 65-fold increased incidence of cutaneous squamous cell carcinoma in organ transplant recipients, compared with the general population in Norway (J. Am. Acad. Dermatol. 1999;40:177-86). Researchers are less certain about melanoma incidence. The Norwegian study of 2,561 kidney and heart recipients found three times increased risk of melanoma, but another study of 5,356 patients in Sweden found no increased risk (Br. J. Dermatol. 2000;143:513-9).

Not only are skin cancers more common in organ transplant recipients, they also tend to progress more rapidly. Multiple lesions are more likely. Recurrence and metastasis rates are higher as well.

Incidence of skin cancer increases with the duration of long-term immunosuppression. Other contributing factors are exposure to UV radiation, genetic risk, and infection with human papilloma virus.

The risk of skin cancer might vary by the type of organ transplanted, according to some researchers. For example, squamous cell carcinoma may be two to three times more likely in cardiac vs. renal transplant recipients. In addition, there may be a lower risk of skin cancer after a liver is transplanted, compared with other organs, but additional research is needed, Dr. Brown pointed out.

The International Transplant Skin Cancer Collaborative suggests a full body exam at least annually, with particular attention to previous sites of nonmetastatic skin cancer. In addition, treat actinic keratoses aggressively and lower the threshold for considering a skin biopsy in these patients, the group suggests.

"You can never be faulted for following these high-risk patients too closely," Dr. Brown said.

The collaborative promotes increased patient education on sun exposure and skin and lymph node self-examination. A telephone survey of 200 organ transplant recipients found 88% were unaware of their increased risk for skin cancer (Dermatol. Surg. 2004;30:610-15). A total of 35% reported regular sunscreen usage in the survey, but 35% also reported getting a sunburn the previous summer.

A separate survey of 122 renal transplant recipients found 41% could not recall skin cancer education (J. Am. Acad. Dermatol. 1999;40:697-701). Although 27% reported seeing a dermatologist after transplantation, only 14% had regular follow-up. ■

A Typical, Challenging Case

A 68-year-old white male with Fitzpatrick type III skin had a bilateral lung transplant in 1993. Four years later, he developed squamous cell carcinoma, primarily in situ. The lesions progressed, and he was diagnosed with squamous cell carcinoma on his vertex and parietal scalp areas in 1998. The lesions were present against a background of multiple actinic keratoses, and were removed by electrodesiccation and curettage.

In mid-2000, the patient had two-stage Mohs' surgery for the vertex squamous cell carcinoma.

Two months later, he presented with "poorly differentiated squamous cell carcinoma without a connection to the epidermis," said Dr. Brown.

The patient had radiation therapy after developing eight metastases within 1 month. In September of 2000, he developed additional metastases within the radiation site. Clinicians reduced his immunosuppressive drugs by 50%, and the patient developed more than 30 metastatic nodules. The patient then had multiple excisions and radiation therapy with capecitabine (Xeloda) for sensitization. The patient never developed adenopathy. CT scans of his chest were negative. In March 2002, he began a trial of intralesional methotrexate every 2 weeks with excellent resolution, Dr. Brown reported. The patient died in July 2002.

Neurofibromatosis Patients Have Normal Ca Rates as Adults

BY LINDA LITTLE
Contributing Writer

GRAPEVINE, TEX. — Patients with a history of neurofibromatosis type 1 do not have an increased risk of cancer after they reach adulthood, according to findings from a study conducted in Denmark.

In a long-term follow-up study of 212 individuals with neurofibromatosis type 1 (NF1) and 128 relatives, children and adolescents with neurofibromatosis had twice the expected rate of cancer—but during adulthood, their risk of cancer was no different from that of the general population, S. Asger Sorensen, M.D., reported at a meeting sponsored by the American College of Medical Genetics.

"It was thought that patients with this disorder had a higher rate of cancer not only in childhood but in the later years of life," said Dr. Sorensen, emeritus professor of genetics at the University of Copenhagen.

Individuals with NF1 were thought to have an increased risk of developing breast cancer or other malignancies during adulthood. "But there seems to be no excess of cancer in neurofibromatosis patients at older ages," he said.

Neurofibromatosis—an autosomal dominant disorder that results in tumor growth—affects 1 person in 4,000, with about 100,000 Americans estimated to have the condition. These figures included both forms of the disease, type 1 and type 2.

'The picture isn't as bad as people thought. When doctors talk with a couple about what lies ahead for them, they don't want to paint a picture that is overly grim.'

The probands in the study had been hospitalized with the disease, whereas the affected relatives had milder cases of disease and were diagnosed only after the start of the initial study, noted John Mulvihill, M.D., professor of genetics at the University of Oklahoma Health Sciences Center, Oklahoma City.

Dr. Mulvihill, a coauthor of the study, said cancer incidence was higher in the probands who had been hospitalized than in other affected family members. "Mortality was worse in children and adolescents but much worse in the hospital-based cases than other family members who were affected. Some patients never wind up in the hospital."

The patients, some of whom were identified as early as 1924, were first described in a 1951 study and were followed up in 1983 and 2003, Dr. Sorensen said.

In 1983, the researchers evaluated the remaining 16 NF1 patients who had been hospitalized with the disease and 26 relatives diagnosed in the 1951 study as having milder forms of NF1. By the time of the March 2003 follow-up, only five relatives were still alive.

Death certificates and hospital records were obtained for the 37 individuals who died after the 1983 follow-up. Survival curves were prepared by standard life-table methods, and the causes of death were compared with those in the general population.

At the latest follow-up, the survival rate showed the same trend as that observed at the first follow-up. The causes of death were similar to the causes of death in the population at large.

Among the 16 probands and 26 affected relatives, 5 had a cancer, all outside the nervous system. For the entire cohort, the age at cancer diagnosis was significantly younger among individuals with NF1 occurring primarily in childhood and adolescence.

But by adulthood, the incidence of cancer had leveled off, Dr. Sorensen said.

The excess cancer rate in childhood involved cancer of the nervous system, brain, and peripheral nerves, Dr. Mulvihill said.

"This is an important study," he said. "The picture isn't as bad as people thought. When doctors talk with a couple about what lies ahead for them, they don't want to paint a picture that is overly grim."

"What is new is that the excess rate of cancer is confined to a young age," Dr. Mulvihill said. "Kids and adolescents with NF1 have excess cancer, but after that, the cancer rate approaches that of the average population." ■