

Second Look at Biopsy Could Avert Mohs Surgery

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ORLANDO — Reviewing the original biopsy slides of patients before they undergo Mohs surgery could result in a change of diagnosis, which in some cases could avert unnecessary surgery, according to Dr. Suzy T. Butler.

In a retrospective study of 3,345 patients, a second review of the original biopsy slide resulted in 74 changed diagnoses. Of these, 45 patients had a change in their management and 25 avoided an unnecessary surgery, Dr. Butler said at the annual meeting of the American Society for Dermatologic Surgery. The study reviewed all patients referred to the cutaneous oncology unit for Mohs surgery at St. Louis University from January 2003 to March 2007.

In one case, a 76-year-old white female presented to her dermatologist with a pink papule on her right cheek that had been previously treated with liquid nitrogen. A shaved biopsy showed an atypical spindle cell proliferation that was read as a desmoplastic malignant melanoma.

A review of the biopsy slides, however, diagnosed the patient as having dermal scar, said Dr. Butler of St. Louis University. Because of this discrepancy, additional biopsies were performed. These confirmed the diagnosis of scar.

An s100 stain showed a few spindle cells in the dermis. Surgery was cancelled, and close observation was planned.

In another case, a 74-year-old white male presented with a 1-year history of pink scaly plaques at the suprapubic area. A punch biopsy was originally read as superficial spreading melanoma in situ.

A review of the biopsy before surgery, however, suggested extramammary Paget disease, which was confirmed with additional biopsies. The patient underwent "slow Mohs" surgery with permanent section histology, as well as a thorough malignancy work-up that was negative.

"These cases illustrate how second-opinion review of histopathology before treatment can either avoid potentially disfiguring, unnecessary surgery or direct a different surgical approach and guide the need for other testing," said Dr. Butler.

In addition to recording the number of cases in which the diagnosis changed, the investigators noted how the diagnosis changed and then reviewed the patient's chart to see how that change affected the

patient's management. They also recorded the board certification of the original pathologist. Nearly half (48%) of the slides that were re-diagnosed had been read by certified dermatopathologists, Dr. Butler said.

The most common change in diagnosis was from one malignant tumor to another in 43% of the patients. Most commonly, a basal cell carcinoma (BCC) diagnosis changed to squamous cell carcinoma (SCC), or a melanoma went from in situ to invasive or vice versa, Dr. Butler said.

The next most common change in diagnosis was from malignant to benign in 36% of the patients. This was often a seborrheic keratosis or a verruca vulgaris being misdiagnosed as SCC.

BCC was most likely to be misdiagnosed, followed by SCC, and then by melanoma and melanoma in situ, Dr. Butler noted. Seventeen percent of discordant diagnoses involved melanoma and melanoma in situ.

"Misdiagnoses involving basal cells are likely related to their high representation in our population, as opposed to any di-

agnostic challenge," she said. "On the flip side, considering the small proportion of total tumors that melanoma and melanomas in situ represent in our population, they comprise a surprisingly substantial proportion of the misdiagnosed tumors."

She suggested that the diagnoses of melanoma or melanoma in situ might be the most cost-effective diseases to target with second-opinion review.

The most common change in patient management was cancellation of surgery in 25 patients. The planned surgical approach was changed in another 10 patients, and 1 patient had to be scheduled for surgery as a result of the second biopsy reading, Dr. Butler said.

The cost of taking a second look at biopsy slides is considerable, however. "We did a cost analysis and found that the estimated cost of reviewing the biopsy slides would be approximately \$93,000 a year at our university based on the number of slides we look at per year. That is significant, but it has to be weighed against the other benefits," she said.

Surgeons gain much useful information regarding the nature of the tumor, particularly useful when there are deeply infiltrating, aggressive tumors or in cases of perineural involvement, said Dr. Butler, who disclosed having no conflicts of interest relevant to her presentation. ■



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DR. BUTLER

MRSA Screen Before Mohs Cuts Postop Infection Rate

ORLANDO — Screening and treating methicillin-resistant *Staphylococcus aureus* nasal carriage in patients before Mohs surgery lowered postoperative MRSA infection rates, according to a new study.

A patient screening and decontamination protocol in the week before surgery brought the postoperative MRSA infection rate to zero. Before such a protocol was in place, the rate was 0.33%, Dr. Katharine Cordova, of Brown University, Providence, R.I., reported in a poster at the annual meeting of the American Society for Dermatologic Surgery.

The protocol screened all patients for nasal MRSA colonization during the preoperative consultation appointment. Patients previously treated with Mohs surgery and patients from the local Veterans Affairs hospital were not screened. Over an 11-month period, 963 nasal swabs were obtained, and 23 MRSA carriers were identified.

Carriers were treated preoperatively with intranasal mupirocin twice daily for 5-7 days and perioperatively with oral trimethoprim-sulfamethoxazole for 5-7 days starting 1 day before surgery.

Patients were also given chlorhexidine or chloroxylenol and cocamidopropyl PG-dimonium chloride phosphate (Techni-Care) body washes to be used the 5 days preceding surgery.

None of the patients developed a MRSA infection.

By mistake, one of the MRSA carriers was not given perioperative treatment. The patient subsequently developed a MRSA wound infection.

Dr. Cordova acknowledged that such a screening program is costly, especially because the incidence of MRSA infections after Mohs surgery is very low. "A large number of negative swabs must be obtained in order to detect one MRSA carrier. At our institution, each negative nasal swab costs \$63.00 and a positive screen requires confirmatory testing, which costs an additional \$90.00," she said.

A practical approach would be to screen patients with prior MRSA infection or colonization, who are known to be at increased risk for repeat infections and complications, she suggested.

Dr. Cordova declared that she had no conflicts of interest relevant to her presentation. ■

Microscopy Helps Monitor Lentigo Maligna Treated Nonsurgically

ORLANDO — Reflectance confocal microscopy can be used as an aid to the clinical exam to help detect either incomplete treatment or recurrence of lentigo maligna and lentigo maligna melanomas that have been treated with nonsurgical methods, a resident in dermatologic surgery said.

After being treated nonsurgically with imiquimod, two patients with biopsy-proven lentigo maligna melanomas were monitored with the aid of reflectance confocal microscopy. In both cases, suspicious areas were detected and were later confirmed to be residual disease on biopsy.

Such cases illustrate the importance of closely following patients with lentigo maligna who are treated with alternative therapies, said Dr. Hari Nadiminti of Memorial Sloan Kettering Cancer Center, New York.

Surgical excision remains the standard of care for treatment of lentigo maligna and lentigo maligna melanoma, but it can be associated with significant morbidity, Dr. Nadiminti said at the annual meeting of the American Society for Dermatologic Surgery.

Alternatives to surgery include cryotherapy, radiotherapy, and topical 5% imiquimod.

Reflectance confocal microscopy is a high-resolution, painless imaging technique that reveals epidermal structures including cells, connective tissue, and blood vessels to a maximum depth of 350 micrometers. It has been used to diagnose pigmented basal cell carcinoma and to differentiate between benign and malignant melanocytic le-

sions and actinic keratoses from normal skin.

Dr. Nadiminti presented five cases to illustrate how microscopy can be useful in monitoring lentigo maligna and lentigo maligna melanoma patients who opt for nonsurgical treatment.

In the first three cases, patients aged 87, 85, and 76 years opted for treatment with imiquimod. In all of these cases, patients had a significant inflammatory response to imiquimod and clinical clearance of pigment after 3 months of treatment.

Reflectance confocal microscopy demonstrated no residual bright structures as well as remodeling of the collagen into a honeycomb pattern in some instances. A confirmatory biopsy revealed no residual melanoma.

In the next two cases, reflectance confocal microscopy revealed persistence of lentigo maligna melanoma after treatment with imiquimod in one case and cryosurgery in the other. Pigmentation cleared completely in one patient and partially in the other. Upon examination with reflectance confocal microscopy, bright structures were observed, and biopsy confirmed the persistence of lentigo maligna melanoma.

After nonsurgical therapies, patients should be followed very closely to monitor for either incomplete treatment or recurrence, Dr. Nadiminti said.

"Even though you have clearance of the pigment with imiquimod, you don't necessarily have clearance of the tumor," he said.

Dr. Nadiminti disclosed no conflicts of interest relevant to his presentation. ■