Biopsy Followed by Immediate Curettage and Electrodesiccation of Suspected Basal Cell Carcinomas at the First Visit

The diagnosis and treatment of basal cell carcinoma (BCC) represents a significant portion of the work for many dermatologists. Any efficiency in this endeavor is welcome. This study assesses the value of both biopsying and treating a suspected BCC on the first visit.

Methods | The purpose of this study was to determine both the positive predictive value (PPV) and the success rate (SR) for the biopsy and treatment at the same (first) visit of a lesion suspected of being a BCC. The PPV was the proportion of cases that our algorithm identified as positive for BCC that actually were BCC on histologic analysis. The SR was defined as the proportion of lesions that were treated appropriately (BCC, squamous cell carcinoma [SCC], Bowen disease, or actinic keratosis) out of the total treated with curettage and electrodesiccation (C & D) on the first visit. The entrance criteria were as follows: (1) The lesion was biopsied by a dermatologist in the department of dermatology; (2) the lesion was thought to be a BCC and BCC only (eg, lesions that the medical chart noted as “rule out BCC vs SCC” were excluded); and (3) the lesion was biopsied and treated with C & D at that same (first) visit.

A retrospective medical chart analysis was performed over approximately 1 year from July 2011 to July 2012. Fifteen dermatologists worked in the department during that time. For any given physician, the 3 most recent months of patient data were analyzed in an attempt to fill the study. The goal was to have at least 500 data points (individual biopsies). After 1 cycle through all 15 dermatologists, the study had not been filled, so an additional 3 months of patient data were analyzed for some of the physicians (chosen at random). The total number of data points was 524.

For all lesions that met these entrance criteria, the results of the biopsy were recorded. The positive predictive value for all lesions was determined twice: first, for all lesions for which the pathologic finding was found to be BCC (PPV), and second for all lesions found to be either a BCC, SCC, Bowen disease, or actinic keratosis (SR)—diagnoses for which C & D is appropriate.

This study was approved by the Kaiser Permanente Southern California institutional review board.

Results | A total of 524 individual biopsies by 15 dermatologists were studied. Many patients had multiple lesions. The positive predicted proportion of BCC was 84.0% (95% CI, 80.5%-87.0%) (Table 1). The positive predicted proportion for BCC, SCC, Bowen disease, or actinic keratosis (SR) was 95.8% (95% CI, 93.7%-97.4%) (Table 2). The individual SR for each of the 15 dermatologists was also calculated (data not shown). These individual SRs varied from 86.84% to 100% showing no outliers. No melanomas or Merkel cell cancers were inadvertently treated with C & D in this study. Benign lesions that were inadvertently treated with C & D were as follows: scar, syringoma, inflammation, purpura, inverted follicular keratosis, epidermal inclusion cyst, seborrheic keratosis, fungal folliculitis, acanthosis, comedone, benign nevus, digital mucous cyst, and sebaceous hyperplasia.

Discussion | Basal cell carcinoma is the most common cancer. The cost of its diagnosis and treatment represents a large percentage of the budget for departments of dermatology. The biopsy and immediate C & D at the first visit of a lesion suspected to be a BCC has the potential for improving efficiency. There is a risk, however, that nonmalignant lesions will inadvertently be overtreated or that amelanotic melanomas will be treated and prognostic information (eg, depth of melanoma) will be lost. This study did not address histologic patterns (eg, sclerosing BCC, perineural invasion). If a histologic pattern is found that conveys a high risk of recurrence, surgery at the treatment site can always be performed.

In our pilot study, 84% of lesions thought initially to be BCC turned out to be BCC histologically. Furthermore, 95.8% of the time, C & D was the appropriate treatment for the pathologic diagnosis. Note that all health care providers in this study were board-certified dermatologists. These results cannot be generalized to nondermatologists.

In conclusion, this study supports the notion that performing C & D at the first visit of a lesion suspected of being a
BCC by a board-certified dermatologist can be an efficient approach, with a high success rate and a low risk of negative outcomes.

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Invited Commentary | PRACTICE GAPS
Immediate Curettage and Electrodeessication Following Biopsy of Suspected Basal Cell Carcinoma at Initial Visit

This retrospective medical chart review attempts to establish the clinical value of performing a biopsy and treating a lesion suspected to be a basal cell carcinoma (BCC) with curettage and electrodeessication (C & D) at first visit. The positive predictive value was 84% for lesions confirmed to be BCC on histologic confirmation. The success rate, defined as the proportion of lesions that were treated appropriately, was 95.8%.

This study suggests that dermatologists are extremely accurate about clinically diagnosing lesions that are appropriately treated by same-day electrodeessication and curettage. Diagnosis and treatment of BCC at the same office visit would improve clinical efficiency and practice outcomes. This would also allow for improved patient access to dermatological care, as appointment times would be more available for patients with suspicious lesions. The practice gap identified herein may be the predilection for practicing dermatologists to suspect skin cancer, biopsy it only, and then perform C & D at a later date. Many patients may not necessarily require surgical excision or Mohs micrographic surgery for treatment of all BCC lesions. This practice gap may exist because of current reimbursement strategies (ie, fee for service model; eg, the health care provider performs a skin biopsy at initial office visit to be followed by a procedure only at a subsequent office visit).

Possible solutions to narrowing this gap may be an outcomes measure to confirm increased patient satisfaction and improved practice efficiency. Costs to the patient with the previous model include more than one office visit, with time away from work and travel to and from the physician’s office. Considering our current environment of rising health care costs, an additional outcomes measure could be instituted to confirm the reduced cost incurred by academic and private practices of managing appropriate BCC lesions by C & D.

Potential barriers to such a practice may be the perception that extending care into 2 office visits translates into more revenue for the health care provider. However, on deeper analysis, it may be financially more beneficial to include treatment in the initial office visit, thus providing more appointment slots for patients requiring skin cancer screening. Furthermore, histologic confirmation of all lesions treated by C & D and strict adherence to established guidelines of care may help alleviate any concerns on the part of the dermatologist. The caveat, however, is that established clinical guidelines for appropriate management of nonmelanoma skin cancer should be adhered to (eg, recurrent or morpheaform BCC should be treated with surgical excision or Mohs micrographic surgery, but patient-centered care should be included in this decision).

This clinical practice may not be generalizable among non-dermatologists. Among practicing dermatologists, performing a C & D for clinically suspicious BCCs, as in this study, led not only to overtreatment of nonmalignant lesions but also, more important, to loss of tissue for study and appropriate management of pigmented lesions, including amelanotic melanoma. This clinical approach may be safely adopted, provided that all lesions are confirmed by histologic examination and further surgical treatment instituted for BCCs that are at high risk of recurrence.

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RESEARCH LETTER
A Randomized, Double-Blinded, Placebo-Controlled Trial of Oral Polypodium leucotomos Extract as an Adjunct to Sunscreen in the Treatment of Melasma

Treatments for melasma include photoprotection in conjunction with topical agents such as hydroquinone, retinoids, or combinations. These regimens, while reasonably effective, are hindered by adverse effects such as irritation and ochronosis.1,2 Aggressive topical sunscreen use improves melasma as monotherapy.3 However, compliance with frequent sunscreen application is difficult; a more convenient and effective photoprotective regimen is needed. We assessed the effectiveness of Polypodium leucotomos extract (PLE), an oral, commercially available UV radiation protectant, as an adjunct to once-daily topical sunscreen application in the treatment of melasma.

Methods | The sample size was calculated from results of a previous study using topical hydroquinone in which patients with melasma improved significantly with daily application of hy-