Recurrent Basal Cell Carcinoma After Incomplete Resection

June K. Robinson, MD; Susan G. Fisher, PhD

Background: Because the probability of basal cell carcinoma (BCC) recurrence was thought to be 30% to 50%, surgical tradition became not to perform additional resection when the margin was positive.

Objective: To determine whether there is an association among age or sex of the patient, anatomic location, histologic type, or reconstructive procedures and the signs and symptoms of the recurrence, interval between incomplete resection and Mohs micrographic surgery (MMS), or extent of MMS resection.

Design: During 20 years, all patients with incompletely excised BCC of the head referred for MMS were sequentially prospectively accrued into the cohort.

Setting: An outpatient MMS practice.

Patients: Nine hundred ninety-four patients.

Main Outcome Measures: Interval to tumor recurrence, interval to MMS, and extent of MMS as determined by mean surface area resected, depth of resection, and number of tumor nests.

Results: The interval to signs or symptoms of recurrence and to MMS from incomplete resection was greater for men, patients older than 65 years, those having a tumor on the nose or cheek, those with aggressive or fibrosing BCC, and those who underwent flap reconstruction \((P=0.001)\). The extent of MMS resection was greater for those with flap and split-thickness skin graft repairs. The number of tumor nests identified by MMS was significantly greater in those treated with split-thickness skin graft and flap \((P=0.001)\).

Conclusion: Because it is more difficult to control recurrent BCC, treating tumor remaining at the margin of resection in the immediate postoperative period could result in less extensive surgery.

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When Gooding established the policy of deferring treatment of patients with basal cell carcinoma (BCC) having “marginal extension of tumor,” it was estimated that 30% to 50% of BCC would recur after incomplete surgical excision.1,6 In the 1960s, Gooding et al7 found clinical recurrence in 34.8% of a retrospective series of 66 patients with 5-year follow-up. Others concurred with the recommendation for careful follow-up for those with “inadequate excision.”7,8 Two articles1,10 published in the 1980s helped codify the surgical tradition of BCC resection, which included pathological examination of the margins in paraffin-embedded specimens and reconstruction before receiving the results of the pathological examination of the margins. The tradition of various surgical specialties when the margin of resection was positive was not to perform another resection because there was a limited probability that the tumor would recur.

From 1979 to 1999, all patients with incompletely excised BCC of the head referred for Mohs micrographic surgery (MMS) were prospectively accrued. The aim of this study was to examine whether the age or sex of the patient, the anatomic location of the tumor on the head, the histologic type, or the reconstructive procedures affected the signs and symptoms of recurrence, the interval between incomplete resection and MMS, or the size of the subsequent resection by MMS.

RESULTS

PATIENT CHARACTERISTICS

Nine hundred ninety-four patients were sequentially enrolled in the study. During this 20-year period, 32 patients were
PATIENTS AND METHODS

From December 1, 1979, to December 1, 1999, all patients with BCC with incomplete margins of resection at the time of the initial treatment of a primary BCC of the head referred for MMS for care by one of us (J.K.R.) were entered into the study. If there was a recent biopsy confirming the location of the tumor, the area around the biopsy site was defined by curettage and the initial stage of MMS was examined around this area. In addition, 2 to 3 mm of tissue was excised along all aspects of the incision. If there was no recent biopsy, the area around the incision from the incomplete resection was excised. The MMS excision was carried out below the scar of the previous procedure, thus exposing the bed of the initial resection, which was examined using frozen sections. For areas repaired with skin grafts, the whole graft was removed. After the flap was elevated, the resection included scar tissue from the underside of the flap and a portion of the subcutaneous tissue of the flap. Frozen sections were also used to examine the wound bed and the vertical walls of the skin into which the flap was placed (Figures 1, 2, 3, and 4). This method of resecting the bed of the wound, the underside of the flap, and the vertical edges of the wound was a modification of the customary initial stage of the MMS procedure. By sparing resection of the flap and thinning it to the thickness of a graft, the flap was used to reconstruct the defect.

Entry criterion was previous surgical resection of a BCC, with a pathological report indicating that tumor was present at the margins and an operative report describing the previous surgical procedure. Exclusion criteria were surgical resection with a pathological report indicating that the margins were free of tumor, radiation therapy after the incomplete surgical resection, radiation therapy before the incomplete resection, if the previous surgical procedure was a biopsy, and if the previous surgical procedure did not have a pathological report of the margins, eg, electrodesiccation and curettage and cryosurgery.

Trained interviewers gathered information regarding age, sex, previous treatments, time between the previous surgery and when the patient or the physician noticed signs or symptoms of recurrence, the type of signs and symptoms noticed by the patient, and the time between previous surgery and resection by MMS. The type of BCC was determined at the time of MMS and categorized as superficial BCC, solid BCC of the circumscribed type (nodular), solid BCC of the aggressive type (infiltrative), morphealike or fibrosing BCC, and keratotic BCC. All operative and pathological reports concerning previous care were reviewed by the physician, who designated the anatomic location, determined whether the tumor was present or absent at the margins according to the pathological report, and determined the type of previous surgical procedure as resection with primary closure, full-thickness skin graft, split-thickness skin graft (STSG), or flap as recorded by the previous operative report. At the conclusion of MMS, the wound surface area (in square centimeters), the depth of the resection by the deepest plane of the resection (subcutaneous adipose tissue, muscle, cartilage, perichondrium, periosteum, or bone), and the number of discontinuous tumor foci found during MMS were recorded.

Data management was implemented using dBASE III software; statistical analysis was conducted using statistical software (SAS 6.12; SAS Institute Inc, Cary, NC). Standard descriptive statistics were used to describe the demographic and disease and treatment characteristics of the study sample. Univariate analysis to identify associations between dependent factors was conducted using the $\chi^2$ test and analysis of variance for categorical and continuous variables, respectively. Differences were considered statistically significant at $\alpha=.05$ (2-sided).

The independence of predictors of the interval to symptoms or signs and MMS treatment and the measures of the extent of treatment, mean surface area of the resection, depth of the resection, and number of tumor nests was determined by multiple logistic regression. Multivariate analyses were performed using stepwise logistic regression, with interval to symptoms or signs or interval to resection with MMS or with mean surface area of the MMS resection, depth of the resection, and number of tumor nests as the dependent variable, with independent variables of age, sex, anatomic site, pathological type of tumor, and type of previous surgical procedure. For all tests, relationships were considered statistically significant at $P=.05$. Relationships that did not demonstrate statistical significance are not reported.

SYMPTOMS AND SIGNS

Symptoms reported by patients at least 1 year after surgery included persistent itching or tingling at the surgical site (38%). Other signs of recurrence noticed by patients were intermittent ulceration or crusting (32%), a papule near the incision line (25%), oozing or bleeding (12%), and firm swelling in the surgical area (7%). Because some patients reported more than 1 sign or symptom of recurrence, the percentage of all reported symptoms is greater than 100%.

The mean±SD age of patients presenting with symptoms at 2 years or earlier was 47±8 years and for those presenting after 2 years was 63±11 years. There were significant differences in patient age by time to onset of symptoms of recurrence ($P<.001$).

INTERVAL TO RECURRENCE AND EXTENT OF RESECTION WITH MMS

The mean±SD age of those with an interval of 2 years or less from the surgical treatment with incomplete resection to treatment with MMS was 45±6 years; 2 to 5 years was 59±12 years, and greater than 5 years was 71±15 years. The differences in age by the 3 time intervals from initial surgery to MMS were significantly different ($P=.001$).
Sex, anatomic location of the tumor, histologic type of the tumor, and type of initial surgical procedure were all significantly associated by multivariate analysis with the onset of signs or symptoms of recurrence (Table 1). Women (52%) were more likely to report symptoms within 2 years of the original incomplete resection than men ($P = .001$). There are also statistically significant differences in the time to onset of symptoms after the initial excision according to site of the original lesion ($P = .001$). Whereas 100% of all scalp lesions developed symptoms of recurrence within 2 years, only 26% of primary tumors on the cheek produced symptoms during the first 2 years. Onset of symptoms of recurrence varied significantly among the histologic subtypes ($P = .001$). Whereas 85% to 89% of superficial and keratotic lesions developed recurrent symptoms within 2 years, only 21% of fibrosing lesions demonstrated recurrent symptoms in the first 2 years after incomplete resection. Last, there is a highly significant difference in time to onset of recurrent symptoms by type of initial surgical procedure. Whereas only 26% of recurrences treated with a surgical flap presented within 2 years of the original incomplete resection, most lesions treated with primary closure (87%) and STSG (100%) showed signs of recurrence within 2 years ($P = .001$). Thus, the interval to signs or symptoms of recurrence was greater for men, those older than 65 years, those having a tumor on the nose or cheek, those with aggressive or fibrosing BCC, and those undergoing flap reconstruction.

Figure 1. This patient had a recurrence of a nodular basal cell carcinoma of the right nasal sidewall, lower lid, and inner canthus under a cheek flap. Tumor at the distal one third of the flap and surrounding skin were debulked by curettage and completely resected with Mohs micrographic surgery. When the proximal two thirds of the flap was elevated, a gray-white tumor mass (white arrow) extended under the base of the flap.

Figure 2. The underside of the elevated flap, the base of the wound under the flap, and the vertical edges of the skin into which the flap was inset were resected by Mohs micrographic surgery. Three tumor foci were seen on frozen sections at the junction of the skin of the upper lid extending to the glabellar area, the periosteum of the wound bed on the nasal sidewall, and the base of the flap on the cheek.

Figure 3. After the tumor was resected, the base of the flap was placed into the wound bed. The area of the nasal sidewall (marked with gentian violet) had periosteal invasion by tumor, which required resection of the surface of the bone. The patient is tearing because the lacrimal drainage system is not functioning. The lacrimal duct of the lower lid was resected, and the duct of the upper lid is occluded by edema.

Figure 4. Six months after a split-thickness skin graft was placed over the exposed bone and lacrimal gland, there was a mild ectropion. Gary Lissner, MD, an ophthalmic reconstructive surgeon, performed the nasal bone resection, skin graft, and lacrimal duct reconstruction.
Our data demonstrate significant associations among sex, anatomic site, tumor histologic type, and time from initial resection to reexcision with MMS. Twenty-six percent of women underwent reexcision within 2 years compared with only 4% of men. Similarly, in only 29% of women was the interval from original excision to reexcision greater than 5 years compared with 57% of men ($P=.001$). There were significant differences in length of time from excision to reexcision by site of primary lesion ($P=.001$). Lesions on the ear (35%) or scalp (50%) were reexcised within 2 years of the initial surgery, whereas lesions of the nose (53%) and perioral area (51%) tended not to be retreated until more than 5 years after the original diagnosis. Tumor histologic type was associated with time to treatment of recurrence ($P=.001$), with superficial (42%), nodular (34%), and keratotic (25%) lesions recurring relatively rapidly compared with aggressive and fibrosing lesions, which more often were reexcised after 5 years (65% and 73%, respectively) ($P=.001$).

The type of initial surgical treatment was also a significant factor in determining time to detection of recurrence and treatment. In lesions initially repaired by a flap, the recurrent lesion was excised later than in those repaired with a primary closure or full-thickness skin graft ($P=.001$). All 12 lesions originally closed by STSG were reexcised within the first 5 years. Thus, the time from incomplete resection to MMS was longer for men, those older than 65 years, those having a tumor on the nose or perioral area, those with an aggressive or fibrosing tumor, and those reconstructed with a flap. Multivariate analysis showed that all of these variables correlated with the interval from incomplete resection to MMS.

### Table 1. Clinical Characteristics of 962 Patients With Incomplete Resection of Basal Cell Carcinoma*

<table>
<thead>
<tr>
<th>Clinical Features</th>
<th>Total (N = 962)</th>
<th>$\leq 2$ (n = 452)</th>
<th>$&gt; 2$ (n = 510)</th>
<th>$\leq 2$ (n = 148)</th>
<th>$&gt; 2$ (n = 406)</th>
<th>$&gt; 5$ (n = 408)</th>
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</thead>
<tbody>
<tr>
<td><strong>Sex†</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>461 (48)</td>
<td>191 (41)</td>
<td>270 (59)</td>
<td>18 (4)</td>
<td>180 (39)</td>
<td>263 (57)</td>
</tr>
<tr>
<td>Female</td>
<td>501 (52)</td>
<td>261 (52)</td>
<td>240 (48)</td>
<td>130 (26)</td>
<td>226 (45)</td>
<td>145 (29)</td>
</tr>
<tr>
<td><strong>Anatomic site†</strong></td>
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</tr>
<tr>
<td>Nose</td>
<td>414 (43)</td>
<td>173 (42)</td>
<td>241 (58)</td>
<td>48 (12)</td>
<td>147 (36)</td>
<td>219 (53)</td>
</tr>
<tr>
<td>Peri-orbital</td>
<td>115 (12)</td>
<td>55 (48)</td>
<td>60 (52)</td>
<td>21 (18)</td>
<td>55 (48)</td>
<td>39 (34)</td>
</tr>
<tr>
<td>Perioral</td>
<td>106 (11)</td>
<td>61 (58)</td>
<td>45 (42)</td>
<td>17 (16)</td>
<td>35 (33)</td>
<td>54 (51)</td>
</tr>
<tr>
<td>Forehead</td>
<td>76 (8)</td>
<td>42 (55)</td>
<td>34 (45)</td>
<td>14 (18)</td>
<td>39 (51)</td>
<td>23 (30)</td>
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<td>Cheek</td>
<td>145 (15)</td>
<td>37 (26)</td>
<td>106 (75)</td>
<td>5 (3)</td>
<td>78 (54)</td>
<td>62 (43)</td>
</tr>
<tr>
<td>Ear</td>
<td>68 (7)</td>
<td>46 (68)</td>
<td>22 (32)</td>
<td>24 (35)</td>
<td>34 (50)</td>
<td>10 (15)</td>
</tr>
<tr>
<td>Scalp</td>
<td>38 (4)</td>
<td>38 (100)</td>
<td>0</td>
<td>19 (50)</td>
<td>18 (47)</td>
<td>1 (3)</td>
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<tr>
<td><strong>Pathological type†</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Superficial</td>
<td>19 (2)</td>
<td>17 (89)</td>
<td>2 (11)</td>
<td>8 (42)</td>
<td>10 (53)</td>
<td>1 (5)</td>
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<tr>
<td>Nodular</td>
<td>250 (26)</td>
<td>143 (57)</td>
<td>107 (43)</td>
<td>86 (34)</td>
<td>150 (60)</td>
<td>14 (6)</td>
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<td>Aggressive</td>
<td>194 (20)</td>
<td>93 (48)</td>
<td>101 (52)</td>
<td>12 (6)</td>
<td>56 (29)</td>
<td>126 (65)</td>
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<tr>
<td>Fibrosing</td>
<td>354 (37)</td>
<td>76 (21)</td>
<td>278 (78)</td>
<td>5 (1)</td>
<td>92 (26)</td>
<td>257 (73)</td>
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<tr>
<td>Keratotic</td>
<td>145 (15)</td>
<td>123 (85)</td>
<td>22 (15)</td>
<td>37 (25)</td>
<td>98 (68)</td>
<td>10 (7)</td>
</tr>
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<td><strong>Previous surgical procedure with incomplete resection†</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary closure</td>
<td>180 (19)</td>
<td>157 (87)</td>
<td>23 (13)</td>
<td>46 (26)</td>
<td>90 (50)</td>
<td>44 (24)</td>
</tr>
<tr>
<td>FTSG</td>
<td>208 (22)</td>
<td>135 (65)</td>
<td>73 (35)</td>
<td>43 (21)</td>
<td>114 (55)</td>
<td>51 (24)</td>
</tr>
<tr>
<td>STSG</td>
<td>12 (1)</td>
<td>12 (100)</td>
<td>0</td>
<td>5 (42)</td>
<td>7 (58)</td>
<td>0</td>
</tr>
<tr>
<td>Flap</td>
<td>562 (58)</td>
<td>148 (26)</td>
<td>414 (74)</td>
<td>54 (10)</td>
<td>195 (35)</td>
<td>313 (56)</td>
</tr>
</tbody>
</table>

* Data are given as number (percentage). MMS indicates Mohs micrographic surgery; FTSG, full-thickness skin graft; and STSG, split-thickness skin graft.
† Sex, anatomic site, tumor type, and previous surgical procedure are significantly related to the interval to symptoms or signs and to the interval from incomplete resection to MMS ($P<.05$ for all).

### Table 2. Anatomic Location and Surgical Procedure With Incomplete Resection*

<table>
<thead>
<tr>
<th>Anatomic Site</th>
<th>Primary Closure (n = 180)</th>
<th>FTSG (n = 208)</th>
<th>STSG (n = 12)</th>
<th>Flap (n = 562)</th>
<th>Total (N = 962)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nose</td>
<td>0</td>
<td>197 (48)</td>
<td>0</td>
<td>217 (52)</td>
<td>414</td>
</tr>
<tr>
<td>Periorbital</td>
<td>19 (17)</td>
<td>7 (6)</td>
<td>0</td>
<td>89 (77)</td>
<td>115</td>
</tr>
<tr>
<td>Perioral</td>
<td>30 (28)</td>
<td>3 (3)</td>
<td>0</td>
<td>73 (69)</td>
<td>106</td>
</tr>
<tr>
<td>Forehead</td>
<td>3 (4)</td>
<td>0</td>
<td>0</td>
<td>73 (98)</td>
<td>76</td>
</tr>
<tr>
<td>Cheek</td>
<td>97 (67)</td>
<td>0</td>
<td>0</td>
<td>48 (33)</td>
<td>146</td>
</tr>
<tr>
<td>Ear</td>
<td>5 (7)</td>
<td>1 (1)</td>
<td>4 (6)</td>
<td>58 (85)</td>
<td>68</td>
</tr>
<tr>
<td>Scalp</td>
<td>26 (68)</td>
<td>0</td>
<td>8 (21)</td>
<td>4 (11)</td>
<td>38</td>
</tr>
</tbody>
</table>

* Data are given as number (percentage). FTSG indicates full-thickness skin graft; STSG, split-thickness skin graft. The initial surgical procedure was significantly associated with anatomic location of the basal cell carcinoma ($P = .001$, $\chi^2$ test).
The initial surgical procedure was significantly associated with the anatomic location of the BCC, eg, scalp and ear locations were associated with STSG and the nose location was associated with full-thickness skin graft (P=.001). It is likely that this association is responsible for the differences in time to recurrence among anatomic sites (Table 2).

The greater extent of MMS defined by the mean surface area resected was significantly associated by multivariate analysis for those with repairs by STSG (67%) and flap (78%), men, those older than 65 years, those with a tumor on the nose or cheek, and those with an aggressive or fibrosing BCC (Table 3). By multivariate analysis, the depth of the resection correlated with the type of initial repair. Whereas lesions initially treated by primary closure or full-thickness skin graft usually required MMS resection only to the depth of adipose tissue, STSG and flaps often necessitated excision to muscle or deeper (92% and 57%, respectively) (P=.001). Whereas 36% of patients had only 1 nest of tumor identified in the area of the initial surgery, 38% had 2 to 3 noncontiguous nests and 25% had more than 3 nests (Table 3). Only the larger number of tumor nests identified at the area of the initial surgery, 38% had 2 to 3 noncontiguous nests and 25% had more than 3 nests (Table 3). When signs and symptoms of BCC appeared after surgical excision, they did so because tumor persisted. During the 2 decades in which patients were prospectively accrued, those with recurrent BCC were treated with radiation therapy or MMS. Because practice guidelines did not exist for selecting radiation therapy or MMS for the treatment of recurrent BCC and all patients with recurrent BCC were prospectively accrued, this study did not experience selection bias. Later presentation for care by men, older persons, and those who underwent flap reconstruction was seen in this study. Men’s delay in presentation for care in this study might be attributed to their delay in recognition of symptoms. Although men and older persons, those with tumors on the nose or cheeks, and those having aggressive or fibrosing BCC experienced delay in care and larger mean surface area of resection, this was not associated with greater depth of resection. The regional anatomic location determined the method of reconstruction, with the nasal area reconstructed with flaps and the scalp and ear with STSG. In this cohort study, the control group of those with positive margins from the initial resection who did not develop clinical signs or symptoms causing them to seek further care was not available. Furthermore, a strong confounding factor that predetermines the type of reconstruction performed is the underlying anatomy (Table 2). Although men, older persons, those with tumors on the nose or cheeks, and those having aggressive or fibrosing BCC experienced delay in care and larger mean surface area of resection, this was not associated with greater depth of resection. The regional anatomic location is also a determinant of tumor penetration, eg, perineural invasion. Similarly, the number of tumor nests was not associated with age, sex, or pathological type of the tumor. When the initial margin of surgical resection was underestimated, it occurred along multiple sites of the margin of resection in 64% of patients, thus giving rise to multiple noncontiguous nests of tumors. Although considerations for creating a smaller surgical scar on the face might have affected creating the narrow margins, other considerations such as inability to clini-
cally determine the margin of tumor or wanting to limit postoperative recovery in the elderly all contributed to incomplete resection, which was the entry criterion for this study (Table 3).

Many observers1-3,7,10 have shown that incompletely removed primary BCC did not clinically recur within 5 or 10 years4, however, the peak incidence of recurrence in many studies was at 2 years.1,3,5,6,9 Those espousing the conservative “wait and see” policy placed great emphasis on the need for conscientious postoperative follow-up.3,6 Given the slow-growth characteristics of BCC, which clinically doubles in size in about 6 months,20 and the relatively asymptomatic nature of tumor growth, clinical recurrence was difficult to ascertain from patients’ observations. Because many patients with incompletely excised BCC were elderly and have impaired vision and cognitive functions, patients may not be reliable observers to report a recurrence. Even physicians have difficulty detecting early recurrence because the signs of BCC might be present only intermittently. The indolent clinical course of tumor was characterized by areas of bleeding or crusting that may heal spontaneously and not be present at the time of the physician visit. Obtaining follow-up of these patients may be difficult because travel is a burden to an aging population. In one study,2 the poor health of the patients prompted discharge from follow-up by 2 years because this was the period usually reserved for those with unremarkable BCC. Ten-year follow-up of the patient population may not be possible because so many will die of other diseases during this time. Gooding et al5 stated that death intervened before potential recurrences could become manifest.

A possible reason for the low recurrence rate after incomplete excision in these early studies was that the tumor appeared to extend to the surgical margin but no further because processing of paraffin-embedded specimens caused retraction of the exposed margin. Hence, a tumor nest appeared to be at the margin on a section from a paraffin-embedded specimen, but the tumor on step sections by frozen section did not extend to the margin. Sarma et al21 found residual tumor in 3 (7%) of 43 on serial frozen sectioning. By frozen section analysis with MMS of 77 patients with incomplete excision of BCC of the face, 55% had residual tumor present.22 Tissue sectioning with MMS allowed greater analysis of tissue margins than the usual pathological preparation of 2-mm serial sections perpendicular to the long axis. Another reason that clinical recurrence did not occur in the earlier studies might be that tumor present at the margin was devitalized during the surgical procedure, eg, by electrocautery, and disappeared after surgery.

In a 1987 British study2 of 60 patients with incomplete excision of BCC, recurrent disease after incomplete excision was more difficult to treat when a flap had been used to close the resulting defect. Our study of 994 patients found that those having reconstruction with flaps or STSG required more extensive resection with MMS and had a greater number of separate tumor nests. The association of STSG with more extensive subsequent resection was because most BCCs repaired with STSG were on the scalp. A common surgical practice was to cover the bone with a STSG and observe for recurrence rather than resect the bone. Richmond and Davie23 concluded that there was an unacceptable risk in denying immediate further treatment to those in whom recurrence was difficult to control, eg, those who have incomplete excisions at the deep margin, in whom flaps have been used, or in whom careful prolonged follow-up poses a problem.

Spontaneous regression of BCC remnants at the margin has been reported4 and was thought to be related to the presence of a weak host response mediated by lymphocytes infiltrating the tumor.21 Others24,25 have reported that residual BCC present in 37% of patients after treatment with curettage and electrodesiccation did not demonstrate regression 1 and 3 months after surgery. This series of 994 patients demonstrated that spontaneous regression of BCC at the margin of an inadequate excision did not occur and should not be counted on to correct the problem. Because incomplete excision of BCC more commonly occurs in the head and neck region than on the trunk and limbs,7 especially on the middle of the face,2,3,6,15,26 and in younger female patients,27 the false hope of spontaneous regression placed patients at risk for later deforming surgery. Because it was more difficult to control recurrent BCC, treating tumor remaining at the margin of resection in the immediate postoperative period should result in less extensive surgery. It is time to cease the practice of observing lesions with positive margins for recurrence of BCC, which was recently reported as a way of treating patients in the 1990s.28 The approach of watchful waiting for tumor recurrence may be reserved for those with debilitating comorbid diseases. As a corollary to treating tumors extending to the surgical margin, it was prudent to reconstruct with an STSG rather than a flap and wait for 2 years. Because the interval to signs of recurrence for STSG was 2 years or less a more definitive reconstruction may be performed if the patient did not have a recurrence within the 2 years.

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Reprints: June K. Robinson, MD, Division of Dermatology, Cardinal Bernardin Cancer Center, Loyola University Stritch School of Medicine, 2160 S First Ave, Room 341, Maywood, IL 60153.

REFERENCES


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**News and Notes**

The Committee on International Affairs of the American Academy of Dermatology is seeking to develop a clearinghouse of opportunities for dermatologists to volunteer in clinics in developing countries for short periods of a few weeks to a month. If you know of such opportunities, please send them to Deborah Kroncke, American Academy of Dermatology, PO Box 4014, Schaumburg, IL 60168-4014; fax: (847) 330-1123 (e-mail: dkroncke@aad.org).

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