Indications and Utility of Intraoperative Mohs Surgery

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ABSTRACT

Mohs micrographic surgery has shown to be a highly successful treatment modality for skin cancer. Its benefits include high cure rates and maximal preservation of normal tissue.

INTRODUCTION

Mohs micrographic surgery has shown to be a highly successful treatment modality for skin cancer. Its benefits include high cure rates and maximal preservation of normal tissue.

Objectives:

The purpose of this study is to delineate criteria and clinical characteristics that predict the need for Mohs resection in the operating room and to identify the patients who benefit most from this approach.

Study Design:

Retrospective chart review from 2003 to 2008.

Methods:

The records for all patients diagnosed with skin cancers of the head and neck who were treated with Mohs micrographic surgery in the operating theater between 2003 and 2008 were retrospectively reviewed. Clinical characteristics of the tumor, as well as patient-related characteristics were recorded. Descriptive analysis was performed.

Results:

Specific clinical characteristics of patients who are ideally suited for inpatient Mohs resection and reconstruction were identified.

Conclusion:

There exists a subgroup of patients who are deemed poor candidates for outpatient Mohs surgery and benefit from intraoperative Mohs extirpation and reconstruction.

METHODS AND MATERIALS

IRB approval was obtained prior to the start of this study.

The records for all patients diagnosed with non-melanoma skin cancers of the head and neck who were treated with Mohs micrographic surgery in the operating theater between 2003 and 2008 were retrospectively reviewed. The University of Rochester Medical Center Department of Dermatology faculty performed all extirpations. All reconstructions were performed by the senior author (TDD).

Clinical characteristics of the tumor (size, location, histology, primary tumor vs. local recurrence, and total number of tumors treated), as well as patient-related characteristics (age, sex, race, marital status, family and self history of skin cancer, use of tobacco or alcohol, history of radiation therapy or immunosuppression, past medical history, and patient's preference) were recorded.

Descriptive analysis was performed.

RESULTS

A total of 107 patients met the study inclusion criteria. The mean age of patients was 69 +/- 14.9 years. 97 patients lived at home alone or with family, 3 lived in a nursing home or rehabilitation facility, 4 were in a group home, and 3 were incarcerated.

Past medical history was significant for Depression/Bipolar disorder (12), history of Cerebrovascular accidents or TIA (7), Alzheimer’s or Dementia (5), Mental Retardation (4), Anxiety (3), Parkinson’s (3), Seizure disorder (2), Autism (1), and HIV (2).

RESULTS cont.

Within this population, a total of 119 non-melanoma skin cancers were treated with Mohs resection in the operating room, followed by reconstruction. Sixty resections were completed in a single stage, 43 required 2 stages, 10 were 3 staged, 4 required 4 stages, and 2 were 5 staged.

Over 114 local flaps were performed, including 19 paramedian forehead flaps, 13 interpolated cheek flaps, and 17 mucosal advancement flaps. In addition, reconstruction required 30 auricular cartilage grafts, 19 full thickness skin grafts, 2 split-thickness skin grafts, and 2 cases required intraoperative tissue expanders. 71 cases were completed under general anesthesia, while 36 patients tolerated IV sedation.

DISCUSSION

Our findings indicate that patients at this institution who undergo intraoperative Mohs extirpation and reconstruction tend to live at home, have insurance, and have a history of prior skin cancers. Their tumors are characterized by complex anatomic location and large size, as well as aggressive behavior.

Although most lesions were less than 5 cm\textsuperscript{2} on preoperative assessment, once extirpation was completed most defects were greater than 5 cm\textsuperscript{2}. The majority of tumors (86.5\%) were cleared in 1 or 2 stages, thus this does not represent a significant increase in operating room time, with better reliability than frozen section confirmation. Surprisingly, patient intolerance of procedures under local analgesia comprised only 7\% of the rationale for Mohs resection in the operating theater.

This study looks only at a population that was completely treated in the operating room. It would be beneficial to compare this population to those who undergo outpatient extirpation, but require reconstruction in the operating room.

REFERENCES