Evaluating Surgical Management and Survival Outcomes in Merkel Cell Carcinoma (MCC): A Retrospective Study at King Hussein Cancer Center (KHCC)

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Introduction

MCC is an aggressive neuroendocrine tumor of the skin that commonly presents on the head and neck (1). Significant risk factors include immunosuppression, age >65, UV exposure, and Merkel cell polyomavirus infection (MCPyV) (2). It is a rare tumor, but the incidence of MCC has nearly doubled in the previous decade (1). Given the rarity of MCC, limited guidelines exist on its diagnostic workup and surgical management. The objective of this study is to evaluate the recurrence and survival rate of patients with MCC following surgical intervention at KHCC.

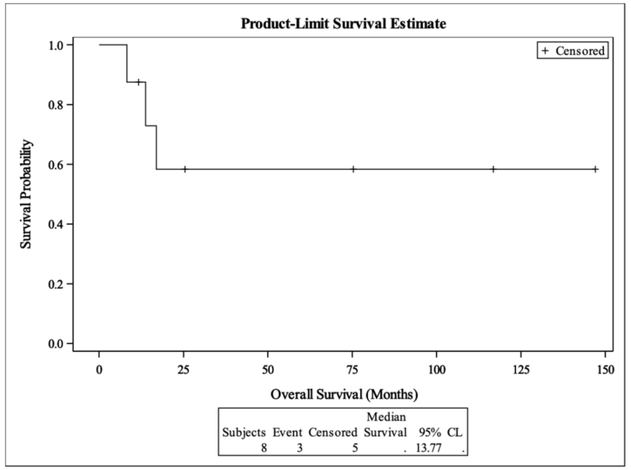
Methodology

Data was retrospectively collected from the KHCC patient portal between 2007 and 2021, including male and female patients aged 59-77 at diagnosis. Patients with confirmed MCC pathology ascertained through diagnostic skin biopsy, were encompassed in the study. Excluding non-MCC neoplastic conditions refined the cohort to eight patients. Kaplan-Meier survival curves were used to analyse the data.

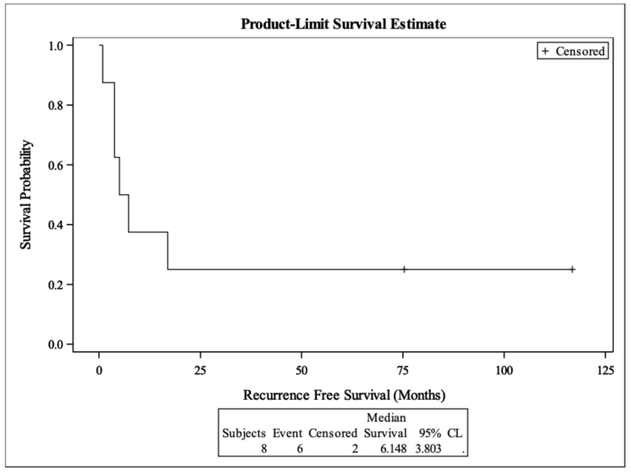
Results

The average duration from initial complaint to diagnosis ranged from 1 month to 2 years, with a median of 1 year. Site of MCC varied from head and neck, trunk, and upper and lower limbs. Sentinel lymph node (SNL) evaluation was performed on all patients given the rapidly progressive course of the disease, with two patients' SNLs returning positive for nodal disease. There was no method of stratifying patients infected with MCPyV. 6/8 patients underwent surgery, as two patients had expired before surgical intervention due to MCC-related causes. This was attributed to late presentation, with advanced stage 3/4 malignancy at initial diagnosis, for which surgical intervention was not warranted. Surgical interventions included wide local excision (WLE) +/- nodal clearance. Excision margins ranged between 0.6- 7*2.5*2.5cm according to tumor location. Adjuvant chemotherapy was given to all but one patient, and adjuvant radiotherapy was only given to half of patients. Distant recurrence manifested in 6/8 patients, with two experiencing concomitant neoplasms, namely skin cancer, and solid organ tumors. The recurrence-free survival rate for this patient cohort at 5 years was 25.00%, and the 5-year overall survival rate was 58.33%. The latter of which is significantly higher than that reported in the US by the National Cancer Institute (NCI) at 24% (3).

Kaplan Meier Survival Curves



MCC 5-year overall survival rate at KHCC between 2007 and 2021: 58.33%



MCC 5-year recurrence free survival rate at KHCC between 2007 and 2021: 25.00%

Conclusion

This study highlights the higher overall MCC 5-year survival rate of 58.33% at KHCC following surgical intervention. The study's small sample size of eight patients and lack of controlled comorbidity profiles emphasize the need for larger cohort studies to establish comprehensive and effective surgical management guidelines for MCC. The potential impact of identifying patients infected with MCPyV for early diagnosis and targeted treatment is yet to be explored.

Acknowledgements

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