PEDIATRIC AMELOBLASTOMA: AN UPDATE ON 28 YEARS OF EXPERIENCE

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Purpose: Ameloblastoma is a benign but aggressive odontogenic tumor of the jaws that may be divided into unicystic and multicystic/solid histologic subtypes. Unicystic lesions can be further subdivided based on the presence of mural involvement of the surrounding bone, and these classifications are important in directing treatment. Ameloblastomas are relatively rare in the pediatric population and there remains controversy surrounding their management in these patients. Classically, pediatric ameloblastomas have been reported as presenting with the unicystic subtype the majority of the time (76.5%),[1] yet recurrence rates in pediatric ameloblastomas have been reported to be much higher than recurrence rates for ameloblastoma overall.[2]

Methods: A retrospective chart review was conducted of patients under the age of 18 years with biopsy-proven ameloblastoma who presented to the University of Maryland Oral and Maxillofacial Surgery Department from 1991 to 2019. This review yielded 29 patients, including 27 patients who were treated at our institution. Data were collected regarding demographic characteristics, radiographic and clinical presentation, histology, treatment modalities, and recurrence.

Results: Average age at diagnosis was 12.9 years (range, 3-17 years). There was an equal distribution of male (52%) and female (48%) patients. The majority of patients were black (52%). Average length of follow-up was 55.4 months (range, 1 month to 23 years). The majority of the lesions were located in the mandible (93%) and lesions most commonly involved the body (59%), followed by the angle (52%) and symphysis (41%). Most lesions were primary (90%), 2 of which had been previously treated but were re-excised in order to remove suspected residual disease. Among tumors for which adequate histologic data were available, 43% were solid/multicystic subtype, 52% were unicystic (55% mural subtype), and 1 was ultimately determined to be an ameloblastic carcinoma. Treatment modalities included both enucleation (37%) and resection (63%). Reconstruction was performed using either nonvascularized autologous bone grafting (53%) or fibula free flap (47%). Two patients developed a recurrence (7% overall, 20% for enucleation), with both cases involving a unicystic mandibular lesion treated initially with enucleation. Both patients were ultimately treated with segmental resection and reconstruction using fibula free flaps.

Conclusion: Previous studies of pediatric ameloblastomas have suggested high rates of recurrence irrespective of treatment modality and recommend initially conservative treatment based on these findings.[2] However, our data suggest that resection serves as an effective treatment modality for this patient population. Our series demonstrates a larger percentage of solid/multicystic and mural unicystic type lesions than has been classically described. Therefore, it may be prudent to view management of these lesions in a manner more similar to the management of adult ameloblastoma. Given the range of reconstructive options available to these patients, we feel that resection represents the most appropriate initial treatment for mural unicystic and solid/multicystic ameloblastomas, regardless of age.

References

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DOES ALCOHOL CONSUMPTION PROTECT AGAINST LATE DENTAL IMPLANT FAILURES?

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Purpose: Social factors have been implicated in the development of various peri-implant pathologies, including implant failure. This study aims to investigate whether varying levels of alcohol consumption affects late dental implant failures.

Methods: A retrospective cohort study was performed to evaluate implants placed between 2006 and 2012 at the Philadelphia Veterans Affairs Medical Center. The primary predictor variable was alcohol consumption, measured as nonconsumption or mild, moderate, and heavy consumption. The primary outcome variable was late dental implant failure. Other study variables included age, sex, and the type of implant restoration used. Appropriate univariate, bivariate, and multivariate statistics were applied, with $P < .05$ used to define statistical significance.

Results: Our retrospective cohort consisted of 103 unique patients and 295 implants with a 5-year minimum follow-up period. Most patients were male (93%) with an average age of 60 at the time of implant placement. Late dental implant failure was associated with 30 implants (10%). Compared to nonconsumption, mild alcohol consumption was associated with a 75% decrease in late implant failure ($P = .0494$), moderate consumption was associated with a 60% decrease in late implant failure ($P = .3826$), and heavy consumption was associated with a 200% increase in late implant failure ($P < .1782$). Compared to mild alcohol consumption, heavy consumption was associated with an 847% increase in late implant failure ($P = .0135$).

Conclusion: The results from this retrospective cohort analysis suggest mild alcohol consumption is associated with a decrease in late dental implant failures, and heavy consumption is associated with an increase in late dental implant failures.

MINIMALLY INVASIVE APPROACH FOR TOTAL TEMPOROMANDIBULAR JOINT REPLACEMENT

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Purpose: This article describes a novel technique for replacing the temporomandibular joint (TMJ) with a prosthesis. The technique applies a simple endaural incision to approach the temporomandibular joint in order to place a total joint prosthesis. This is followed by small trochar site incisions for plating of the prosthesis. The technique was performed on 4 patients (8 TMJs).