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Short Commentary

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The Profile of Ameloblastoma and the Status of Routine Clinical Records from a Developing Country Context

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Ameloblastoma is a common odontogenic tumor with the potential of local invasion and recurrences. Moreover, it has a variable presentation and many challenges surrounding the management of the condition [1]. From public health perspectives through to molecular aetiopathogenesis it paints the portrait of heterogeneity and complexity [2-4]. For example, gender and age distribution, presenting complaints, the clinical record keeping scenarios in developing countries compared to the developed countries, the aggressive potential for local invasion, possibility for malignant transformation etc. Moreover, choosing the optimal mode of management (radical vs conservative surgery) poses a dilemma to the clinician. Findings of retrospective studies on de-identified case notes retrieved for varying follow-up periods provides the major source of scientific evidence on management of ameloblastoma.

We studied randomly selected clinical records retrieved, for clinically diagnosed odontogenic tumors that were histopathologically confirmed as ameloblastoma among selected public Oral and Maxillofacial Units in the Western Province of Sri Lanka. This descriptive analysis was based 35-cases of ameloblastoma reported from 2011 to 2018.

According to age of patients, the mean age was 40.03 ± 19.12 years ranging 12-82 years. These findings were in agreement with similar studies revealing 4th decade of life as the predominant age of presentation despite having a wide variation. As shown in **Table 1**, ameloblastoma could affect adolescent, younger and older age groups but the highest burden is carried by economically productive age group. Moreover, the gender ratio of males to females was 1:1.05 which was in agreement as well as disagreement with other studies conducted elsewhere [2,3].

Painless swelling of the face was the presenting complaint of half of the cases while another 22.9% cases had additional symptoms accompanied with it. In contrast, some other studies reported pain and tumor formation as presenting status [2]. Moreover, in developing

country context dominated by problem based health care visits, ameloblastoma could commonly present at late stages of the advanced disease especially when the swelling is painless. This was corroborated with the finding as the majority (28.6%) had tumor length >5 cm.

The histological type of ameloblastoma influences the management of the condition and the follicular type was the dominant in accordance with other studies. There were 2 cases of ameloblastic carcinomas and notably 25.7% were reported as ameloblastoma without histological subtype. As shown in the results, of a majority of clinical records the basic information such as size, texture, radiological findings were missing as 48.6%, 54.3% and 62.9% respectively.

As shown in **Table 2**, the mandible was the predominantly affected jaw (77.2%) with pre-molar to molar sub-site (31.4%). These findings were in agreement with similar studies [2,3]. According to the mode of management, the majority 42.9% were managed by surgical excision with wide margins and another 34.3% was managed by enucleation and curettage. Another 5.7% were management by dredging technique which is a conservative mode of management of ameloblastoma among young patients. Moreover, 28.6% of cases were recurrent cases but the data on the follow up period was not available [5].

In conclusion, present retrospective case-series analysis revealed the potential impact of painless swellings and missing information with regard to ameloblastoma cases in a developing country context. This could hamper the early detection and the need for long term follow up due to the biological behavior of the tumor. Moreover, many deficiencies in maintaining comprehensive, retrievable patient data bases on conditions like Ameloblastoma are lacking in developing country contexts with many constraints and overcrowded public health care settings. Hence, urgent corrective measures are warranted in this regard in order to improve the existing status.

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| Variable | No: | % |
|---|-----|------|
| Age group (years) | | |
| 12-19 years | 4 | 11.4 |
| 20-40 years | 15 | 42.9 |
| 41-60 years | 10 | 28.6 |
| >60 years | 6 | 17.1 |
| Gender | | |
| Males | 17 | 48.6 |
| Females | 18 | 51.4 |
| Presenting complaints | | |
| Painless swelling | 17 | 48.6 |
| Painless swelling with other symptoms: facial asymmetry, loose teeth. Mucosal fistula | 8 | 22.9 |
| Painful swelling | 4 | 11.4 |
| Painful swelling with other symptoms: loose teeth and sensory loss | 2 | 5.7 |
| Missing information | 2 | 5.7 |
| Radiological features | | |
| Unilocular | 3 | 8.6 |
| Multilocular | 10 | 28.6 |
| Missing information | 22 | 62.8 |
| Histological types | | |
| Follicular | 5 | 14.3 |
| Plexiform | 3 | 8.6 |
| Desmoplastic | 1 | 2.8 |
| Unicystic | 4 | 11.4 |
| Ameloblastoma | 9 | 25.7 |
| Ameloblastic carcinoma | 2 | 5.7 |
| Other types | 11 | 31.4 |
| Size | | |
| Maximum length <2 cm | 2 | 5.7 |
| Maximum length 2-5 cm | 6 | 17.1 |
| Maximum length >5cm | 10 | 28.6 |
| Not recorded | 17 | 48.6 |
| Texture | | |
| Hard/firm | 13 | 37.1 |
| Soft/fluctuant | 3 | 8.6 |
| Not recorded | 19 | 54.3 |

Table 1: Personal details, presenting complaints, radiological features, histological classification size and texture extracted from clinical records of 35 patients with ameloblastoma.

| Variable | No: | % | |
|---|---|------|------|
| Site | | | |
| Maxilla | 4 | 11.4 | |
| Large anterior sector overlapping incisor-canine-pre-molar region | 1 | 2.9 | |
| | Pre-molar region | 3 | 8.6 |
| Mandible | 27 | 77.2 | |
| Incisor to canine region | 2 | 5.7 | |
| | Pre-molar to molar region | 11 | 31.4 |
| | Posterior sector from 3rd molar to ramus of the mandible | 8 | 22.9 |
| | Large anterior sector overlapping incisor-canine-premolar region | 3 | 8.6 |
| | Large posterior sector overlapping pre-molar-molar and posterior sector | 3 | 8.6 |
| Not recorded | 4 | 11.4 | |
| Mode of management | | | |
| Decompression | 1 | 2.9 | |
| | Enucleation & curettage | 12 | 34.3 |
| | Dredging technique | 2 | 5.7 |
| | Surgical excision with wide margins | 15 | 42.9 |
| | Missing data | 5 | 14.3 |
| Recurrence | No recurrences | 25 | 71.4 |
| | Recurrence | 10 | 28.6 |

Table 2: The sub site distribution, mode of management and recurrence rate of extracted from clinical records of 35 patients with ameloblastoma.

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