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MORBIDITY OF THE UPPER WISDOM TOOTH

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Abstract

The upper wisdom tooth, as a result of topography, phylogeny and ontogeny is, directly or indirectly, the main cause of numerous diseases of the oral cavity, the maxillary or the cervico-facial region. It can lead to serious disturbances in the harmony of the dento-maxillary and general health, being the starting point for a lot of complications. It influences the diagnosis and treatment of all dental specialties and constitutes the focal point in oro-dental surgery.

While as recently as 100 years ago the removal of wisdom teeth was an operation which was carried out very infrequently, and only with severe complications, it is now considered a routine procedure, but with a relatively high complication rate, which increases among older patients. The most common complications are: disturbances of sensation, residual root tips, infections of sockets and fractures of the jaw. The complication rate can be considerably reduced by early removal of wisdom teeth.

Key words: morbidity, wisdom tooth, lesion.

INTRODUCTION

In tibetan philosophy wisdom teeth have a special significance: only upon the appearance of them are the preordained relationships of the individual teeth to one another, the preservation of harmony, the balance and perfection of the whole achieved. In contrast to this view is the reality of dental practice, in which the wisdom tooth is regarded as just a problem. It can lead to serious disturbances in the harmony of the masticatory apparatus and the general state of health, and is often responsible for a host of complication.

Wisdom teeth are the last teeth to erupt into the oral cavity and have the most common pathology rash as a result of dento-maxillary incongruency. The main cause of the pathology of wisdom tooth eruption is the lack of space in the arch maxillary alveolar row phylogenetic regression. The maxillary third molar represents the primary cause of numerous affections of the oral cavity, of maxillaries and of the cervicofacial region. The purpose of this paper is to determine the incidence of lesions that appear at the maxillary third molar.

MATERIAL AND METHODS

In the casualty department Dental Polyclinic No.2 in Oradea, over two years, 774 patients have presented severe upper wisdom teeth related diseases. These were: caries, pulpitis, acute apical periodontitis, chronic periferic periodontitis, gangrene, radicular remains, maxillofacial pain. A total of 796 upper wisdom teeth underwent dental treatment.

The percentage distribution of upper wisdom tooth lesions is illustrated in fig.1.



Fig. 1: Diagram of the upper wisdom tooth injuries: C = caries; P = pulpitis; P.a.ac. = acute apical periodontitis; P.m.cr. = chronic periferic periodontitis; G = gangrene; R.R. = radicular remains; Peric. = pericoronaritis; Algii max.-fac. = maxilo-facial pain.

We observe that the largest share is held by radicular remains lesions, which are the lesions with the largest coronary destruction and can be treated through extraction. In second place we have carious lesions, followed by acute apical periodontitis and then pulpitis. On the fifth place we have pulpo-periapical gangrene lesions. Chronic marginal periodontitis (10 cases), pericoronitis (5 cases) and maxillofacial pain (3 cases) are the least frequent cases.

The most frequent type of carious lesion found are profound caries. As for pulpitic lesions, the most frequent type is serous pulpitis. There is a very small percentage of chronic apical periodontitis reacutised.

Of all patients who have addressed to dental care facilities, 325 were males, seeking treatment for 332 upper wisdom teeth while 449 were females, seeking treatment for 464 upper wisdom teeth. Gender distribution for upper wisdom tooth lesions is presented on table 1.

Table 1

Lesion	C.	P.	P.a.ac	P.m.cr	G.	R.R.	Peric	Maxillo- facial pain
Sex								P
8	22.59	13.25	14.16%	2.41 %	10.84	36.15%	0.60	0.00%
	%	%			%		%	
Ŷ	27.80	11.64	16.16%	0.43 %	6.03	36.64%	0.65	0.65%
	%	%			%		%	

Gender distribution for upper wisdom tooth lesions:

Of the total patients, 603 were from urban areas, having undergone dental treatment for 622 upper wisdom teeth and 171 patients were from rural areas, having undergone dental treatment for 174 wisdom teeth (table2).

Table 2

Lesion Area of origin	C.	Р.	P.a.ac	P.m.cr	G.	R.R.	Peric	Maxillo -facial pain
Urban	28.14 %	12.70 %	14.95 %	0.64%	8.20 %	34.25 %	0.64%	0.48%
Rural	16.67 %	10.92 %	16.67 %	3.45%	7.47 %	44.25 %	0.57%	0.00%

The percentage distribution of upper wisdom tooth lesions, by area of origin:

The ages of the patients range between 16 and 87 years. In order to correlate the disease type with age, we divided the patients into six age groups: 16-25 years, 26-35 years, 36-45 years, 46-55 years, 56-65 years, 66-75 years, 76-87 years.

The percentage distribution of upper wisdom tooth injuries by age is shown in the graphs below (fig.2; fig.3; fig.4; fig.5; fig.6; fig.7).

Pericoronaritis lesions are in number of 5, 3 of them being in the 16 - 25 years age group and 2 in the 26-35 years age group. Of these, two were males and three females.

Patients received anti-inflammatory treatment, removal of the hood and extraction.

Maxillofacial pain in the included wisdom teeth were recorded only in women, of which two were in the 16 -25 years age group and one in the 56-65 years age group. Treatment was symptomatic medication and X-ray indication, patients being then guided into oro-maxillo-facial surgery.



Fig.2. Diagram of carious lesions by age



Fig.3. Diagram of pulpitic lesions by age



Fig.4. Diagram of periodontal lesions by age



Fig.5. Diagram of gangrenous lesions by age



Fig.6. Diagram of radicular remains by age



Fig.7. Diagram of chronic periodontal lesions by age

In order to compare the frequency of upper wisdom tooth lesions between age groups we overlap the all graphs into one (fig.8):



Fig.8. Comparative diagram of the upper wisdom tooth lesions by age

It is noted that the age group 16-25 years holds highest percentage for carious lesions. Group ages 26-35 years are highest in pulpitic lesions, acute apical periodontitis, radicular gangrene and rest. As for chronic periodontitis lesions, the maximum percentage is held by age group 56-65 years.

RESULTS AND DISCUSSION

Personally made statistics show that the frequency of accidents and complications related to the upper wisdom tooth eruption is appreciably higher in females (64.51%) than males (35.48%), their highest frequency being up to the age of thirty.

If we follow the pathology of the upper wisdom tooth after having erupted in the oral cavity we notice that caries are most frequently seen in the 16-25 years age group, which corresponds to the tooth eruption age. Therefore we can say about upper wisdom tooth that it "erupts decayed". Due to the difficult and long eruption (period without functionality), sometimes accompanied by an acute congestive phenomena of pericoronitis with partial coverage of the occlusal surface by a mucous hood favoring the accumulation of food debris and bacteria, it can be difficult to clean by brushing. Also because of the tooth arch position, posterior and frequently vestibularized, associated with an occlusal morphology with numerous ditches and enamel pits, it makes dental hygiene maintainance by brushing not effective. Thanks to lack of knowledge in brushing technique, all these factors lead to an early decay of the upper wisdom tooth.

Once the carious process is installed and left untreated, because the tooth is young and the pulpal floor is bulky there is imminent danger of pulpal lesions. Since the apex is still large, the pathological process quickly overtakes the periapical tissue. In conclusion, acute or chronic pulpoperiapical lesions are installed shortly after the eruption. My personal statistics show that the age group 26-35 is most affected by pulpo-periapical lesions and also has the highest percentage of radicular remains as consequence of fracturing the coronal part as a result of low tooth vitality.

We also notice the reversing the ratio of carious lesions and dental caries complications among patients from urban and rural areas. Thus, if the patients from urban areas are prevalent in carious lesions, the patients from rural areas are prevalent in complications of dental caries.

CONCLUSIONS

Together with the six-year molar, the wisdom tooth takes a special position in the permanent teeth category due to caries frequency and pulpal complications. Unlike the six-year molar which presents a typical root morphology and an accessible position for endodontic treatment, the upper wisdom tooth, through its higher position in the distal arch and indirect viewing of the entry in root canals (the dental mirror), it is difficult, sometimes almost impossible to do a correct endodontic treatment. To this is added a large morphologic (curved roots) and number of roots and root canals variety. However, together with the reduced function value (not within the occlusion) and the prosthetic tooth (reduced implantation, ax deviations) the most common labor is the extraction.

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