LACK OF THE SECOND PREMOLARS CLINICAL ASPECTS

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Abstract: *The paper presents the clinical aspects of the lack of the second premolars in adult women patients who wish oral rehabilitation and especially to regain the physiognomic function, lost because of the absence of these teeth.*
Keywords: *lack of teeth, premolars, oral rehabilitation*
Rezumat: *Lucrarea prezintă aspectele clinice intraorale ale anodonţiei, prezente la paciente de vârstă adultă, care doresc reabilitarea orală şi mai ales refacerea funcţiei fizionomice afectate de lipsa acestor dinţi.*
Cuvinte cheie: *anodonţii, premolari, reabilitare orală*

INTRODUCTION

The absence of certain teeth due to the non formation of the dental buds or due to their destruction during the process of development – anodontia – is etiologically plurifactorial, capable of affecting both the primary teeth and the permanent ones. Anodontia may be the clinical expression of a local phenomenon or may be encountered in the context of a systemic affection of the organism.

Studies of the specialized literature mention the reduction tendency of the end teeth: upper lateral incisors, lower central incisors, second premolars, third molars, naming this anomaly as: reduced partial anodontia, agenesis, hypodontia [1].

Reduced anodontia, encountered in around 35 % of the population affects mainly the female gender. In terms of frequency, second premolars anodontia may be detected clinically in 17,5% of the patients, after the lateral incisors anodontia - 36% and that of the third molar - 25,6% [2]

Within this context, dental anomaly regarding the number of the second premolars should be early detected on the clinical examination of the patients, in which the following could be observed:

- Symmetric anodontia with the persistence of the temporary premolar on the arch or the lack of space, through the mesialization of the six-year molar and/or respectively, through the distalization of the first premolar;
- Asymmetric anodontia with the persistence of the molar on the arch or with the migration of the teeth towards the breach;
- Diagonal anodontia (second premolars on two opposite arches);
- Occlusal trauma of the neighbouring teeth through the denivelation of the occlusal plane and the vertical or horizontal movements of the antagonists, due to the unphysiological distribution of the mastication forces;
- Affection of parodontium and of the articular dynamics due to the present occlusal trauma [3].

In the cases in which the temporary tooth still persists on the arch, the differential diagnosis should be made and in case the temporary tooth is missing, the variant of extracting the second premolar must be removed.

The general disorders produced by anodontia impose the rehabilitation, as rapid as possible, of the dental arches' integrity [5]. In the case of second premolar anodontia, this desideratum may be accomplished through different methods:

- Preserving the temporary second premolar on the arch (sometimes up to the third age), in the cases in which it is not affected by decays and its root does not present rhizolysis;
- Extracting the temporary molar if it no longer can be maintained on the arch;
- Reducing the edental spaces through the orthodontic guide of the permanent teeth;
- Maintaining the spaces through the orthodontic guide of the permanent teeth;
- Prothetic oral rehabilitation or through implants;
- Rehabilitation of the dentomaxillary functions.

CASE REPORT

CLINICAL CASE 1

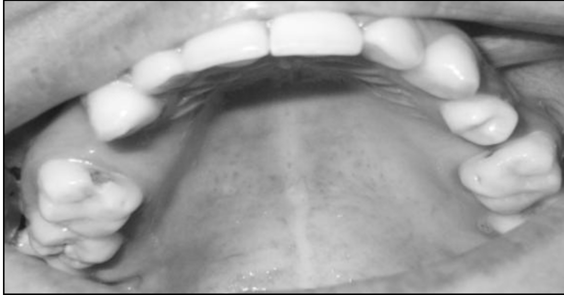
The student patient B.O, aged 23 de ani presents reduced asymmetrical partial anodontia with the following clinical aspect detailed by the help of the orthopantomogram:

- Right upper first and second premolar with sufficient space for the restoration of one single tooth (picture no. 1);
- Left upper second premolar anodontia, with narrow space through the mesialization of tooth 2.6. and the

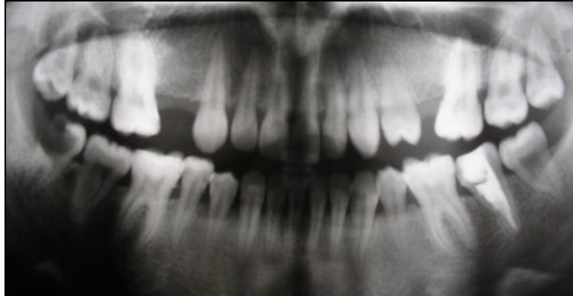
distalization with the rotation of tooth 2.4. (picture no. 1) ;

- Left lower second premolar anodontia with lack of space and contact points between the teeth 3.4. and 3.6. (picture no. 2);
- Right lower second premolar is present on the arch, is complete and does not have a contact point with the tooth 4.4 (picture no. 2).

Picture no. 1: Anodontia of 1.4., 1.5 and 2.5.

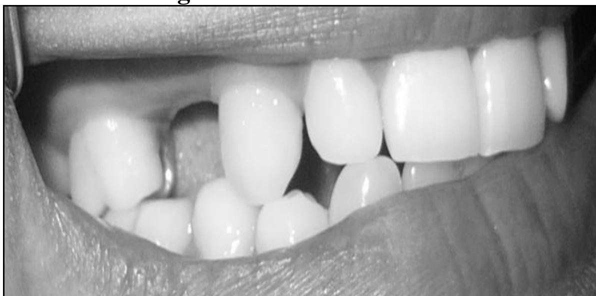


Picture no. 2: Radiographic aspect

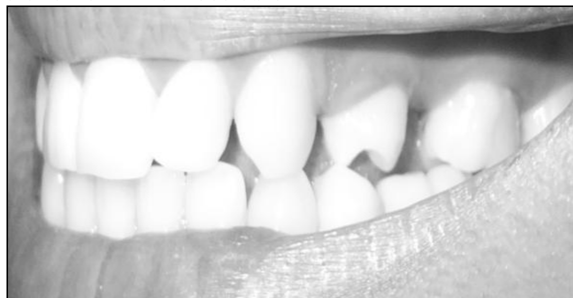


Dental occlusal in lateral areas is unbalanced and unfunctional, bringing about mastication difficulties (picture no. 3 and 4); this convinced our patient to come to our specialized service.

Picture no. 3: Right occlusion



Picture no. 4: Left occlusion

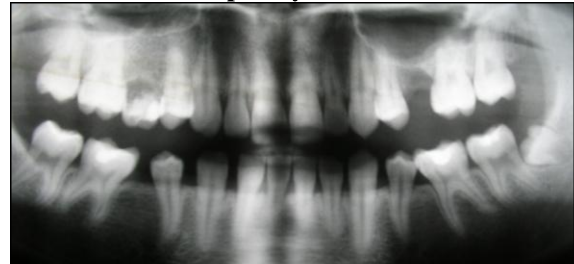


CLINICAL CASE 2

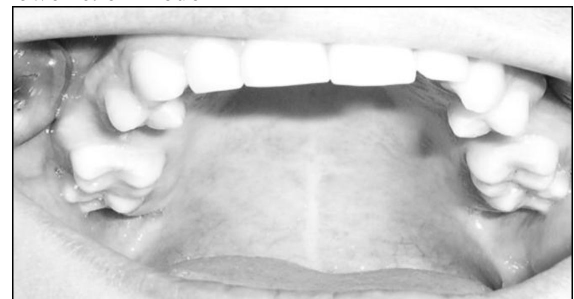
The patient A. D., aged 21 coming from Sibiu, came to our dental medical unit for the restoration of the mastication function. The clinical examination revealed the following aspects:

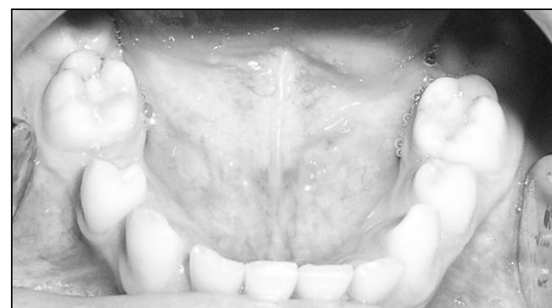
- The patient does not present decays or other odontal affections;
- Persistence on the right arch of the temporary second molar;
- Left upper second premolar anodontia with maintained space; the patient mentioned the extraction of the temporary molar six months ago;
- Left upper second premolar anodontia with lack of space through mesialization of the tooth 3.6. and distalisation of 3.4., with contact point and presence of canine trema;
- Right lower second premolar anodontia with lack of space and presence of tremas in lateral area, which leads to the diagnosis of unidental reduced symmetrical partial anodontia, radiologically confirmed (picture no. 5). Due to the mobility of the tooth 5.4, it is suggested that it should be extracted (picture no. 6).

Picture no. 5: Ortopantomogrpahic aspect with the persistence of the temporary second molar



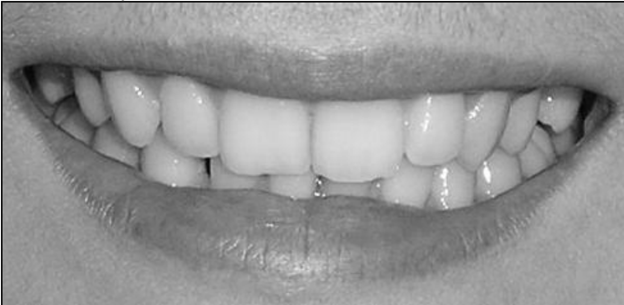
Picture no. 6: Clinical aspect of hemi arches: a. upper, b. lower c. on model

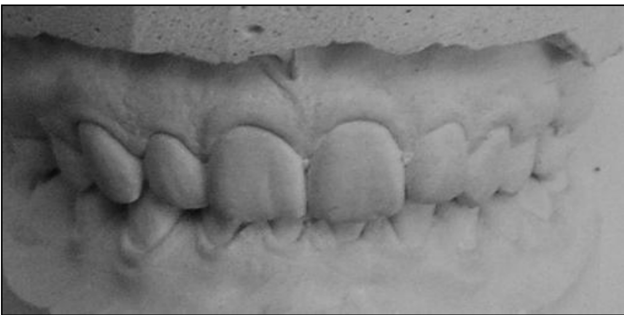




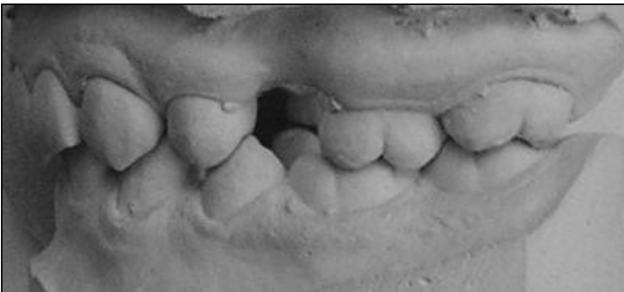
The occlusion in the frontal area is ¾ covered (picture no. 7). The endental area is shown in the lateral areas but the relation at the level of the six-year molar is neutral (picture no. 8).

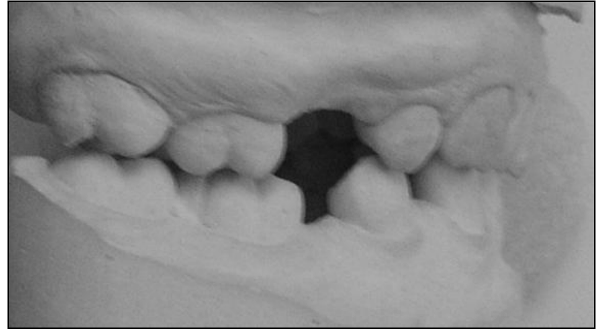
Picture no. 7 a.b: Occlusion in the favourable areas: intra-orally and on the model.





Picture no. 8 a,b: Occlusion in lateral area on the studied model.





CONCLUSIONS

1. Second premolar anodontia is often diagnosticated in adults, mainly affecting the female gender;
2. Bilateral or asymmetric anodontia produces dysfunctions of the dentomaxillary system;
3. In general, the unpleasant physiognomic aspect of the patients is the reason for which they come to the dentist's;
4. Temporary molars may long persist on the arch, that is why the majority of the patients do not acknowledge the presence of anodontia;
5. Once diagnosticated, second molar anodontia makes the patients express their wish for a complete oral rehabilitation.

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