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## Multidisciplinary approach in the treatment of a patient with Turner syndrome: Case Report

### Oral rehabilitation of a patient with Turner syndrome: multidisciplinary approach

**Language:** English

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### Introduction

Turner syndrome is a chromosomal disorder in which one of the sex chromosomes is missing or has other abnormalities. Occurring in one out of every 2500 girls, the syndrome manifests itself in a number of ways: short stature, gonadal dysfunction, hypotiroidism, congenital heart disease. Distinct craniofacial features in Turner syndrome include micrognathia, high arch palate and malocclusion.

### Objectives

In this poster we present a case of a 30 years old female patient with Turner syndrome. (Fig. 1). At the initial presentation she presented a class III malocclusion with periodontal disease at the frontal teeth and multiple carious lesions. (Fig. 2, Fig. 3, Fig. 4) The clinical examination was completed with the orthopantomography (Fig. 5), and study casts (Fig. 6). The collaboration with the cardiologist was determinant for the treatment sequences. The blood pressure was checked routinely and echocardiogram was performed to evaluate possible cardiac defects.

This study was approved by the Ethical Committee of the University of Medicine and Pharmacy "Victor Babeş" and the patient gave us the written consent for full face photography.



Fig. 1: Full face at the first presentation



Fig. 2: The initial smile



Fig. 3: The class III malocclusion: frontal view

Fig. 4: Class III malocclusion: lateral view



Fig. 5: Orthopantomography prior to orthodontic treatment

Fig. 6: Class III malocclusion: diagnostic cast

**Material and Methods**

After the initial periodontal therapy and carious lesions treatment, we decide for the orthodontic treatment. The objectives of orthodontic treatment were :space closure, correct overbite and overjet. The orthodontic treatment consisted of upper and lower fixed appliances Roth .022 with bands on the molar (Fig. 7, Fig. 8). The duration of the active treatment was 18 months and it was followed by retention with vacuum formed retainers.

After completing the orthodontic treatment, the patient presented a class III Kennedy partially edentulous maxilla with modification 1 and a class III Kennedy partially edentulous mandible and was referred for the prosthodontic treatment. (Fig. 9)



Fig. 7: The orthodontic treatment consisted of upper and lower fixed appliances Roth .022 with bands on the molar

Fig. 8: Lateral view of the occlusion during the orthodontic treatment

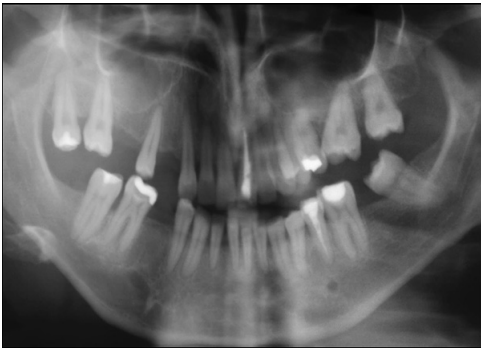


Fig. 9: Orthopantomography after the orthodontic treatment

## Results

The prosthodontic treatment plan consist in two porcelain fused to metal fixed partial dentures. (Fig. 10, Fig. 11) After the prosthetic rehabilitation was completed, we decide to bleach the two central incisors (external bleaching at 11 and both internal and external bleaching at 21). After two weeks we have restored the incisal edges on central incisors with composite resin, to improve the smile design. (Fig. 12, Fig. 13) The satisfaction of the patient after completing the treatment was an important step in rising her self esteem feeling. (Fig. 14).



Fig. 10: The fixed partial denture on the right mandibular arch

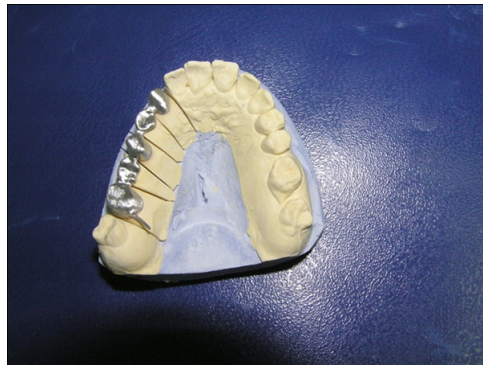


Fig. 11: The framework of the lateral maxillary porcelain fused to metal bridge on the cast



Fig. 12: The final smile: frontal view



Fig. 13: The final smile : lateral view



Fig. 14: Full face at the end of the treatment

## Conclusions

Despite the physical and psychological differences and other problems that can occur in Turner syndrome, with appropriate medical care, interdisciplinary collaboration and ongoing support, a person with Turner syndrome can lead a normal and healthy life. This case revealed a consistent collaboration between the prosthodontist, the orthodontist and the cardiologist, to perform the most appropriate treatment for a 30 years old female patient with Turner syndrome.

## Literature

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*This Poster was submitted by Assist. Prof. Anca Jivanescu.*

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## Multidisciplinary approach in the treatment of a patient with Turner syndrome: Case report.

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### Introduction

Turner syndrome is a chromosomal disorder in which one of the sex chromosomes is missing or has other abnormalities. Occurring in one out of every 2500 girls, the syndrome manifests itself in a number of ways: short stature, gonadal dysfunction, hypotension, congenital heart disease. Distinct craniofacial features in Turner syndrome include micrognathia, high arch palate and malocclusion.

**Key words:** Turner syndrome, orthodontic treatment, prosthetic stabilization

### Case presentation

In this poster we present a case of a 30 years old female patient with Turner syndrome. At the initial presentation she presented a class II malocclusion with periodontal disease at the frontal teeth and multiple carious lesions.



Fig.1 Full face at the first presentation



Fig.2 The initial smile



Fig.3 The class III malocclusion frontal view



Fig.4 The class III malocclusion lateral view



Fig.5 Orthopantomography prior to orthodontic treatment

The collaboration with the cardiologist was determinant for the treatment sequences. The blood pressure was checked routinely and echocardiogram was performed to evaluate possible cardiac defects.

After the initial periodontal therapy and carious lesions treatment, we decide for the orthodontic treatment. The objectives of orthodontic treatment were space closure, correct overbite and overjet. The duration of the active treatment was 18 months and it was followed by retention with vacuum formed retainers.



Fig.6 Diagnostic maxillary model



Fig.6a Class III malocclusion diagnostic cast



Fig.7. Aa The orthodontic treatment consisted of upper and lower fixed appliances Roth 402 with bands on the molars



Fig.7. Ab The orthodontic treatment consisted of upper and lower fixed appliances Roth 402 with bands on the molars



Fig.8 Orthopantomography after the orthodontic treatment

After completing the orthodontic treatment, the patient presented a class III Kennedy partially edentulous maxilla with modification 1 and a class III Kennedy partially edentulous mandible and referred for the prosthodontic treatment. The treatment plan consist in two porcelain fused to metal fixed partial dentures. After the prosthodontic treatment was completed, we decide to bleach the two central incisors (11 external bleaching and 21 internal and external bleaching), and after two weeks we have restored the incisal edges with composite resin, to complete the smile design improvement. The satisfaction of the patient after completing the treatment was an important step in rising her self esteem feeling.



Fig.9 The fixed partial denture on the right mandibular arch



Fig.10 The lateral PFM bridge (the framework)



Fig.11 The final smile frontal view



Fig.12 The final smile lateral view



Fig.13 Full face at the end of the treatment

### Conclusion

Despite the physical and psychological differences and other problems that can occur in Turner syndrome, with appropriate medical care, interdisciplinary collaboration and ongoing support, a person with Turner syndrome can lead a normal and healthy life. This case revealed a consistent collaboration between the prosthodontist, the orthodontist and the cardiologist, to perform the most appropriate treatment for a 30 years old female patient with Turner syndrome.

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