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Do orthodontists recommend Class II treatment according to evidence-based knowledge?

Os ortodontistas recomendam o tratamento das más oclusões de Classe II de acordo com os conceitos científicos atuais?

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Resumo

Introdução: A indicação correta da época de tratamento de uma má oclusão de Classe II é essencial para o exercício ético e eficiente da Ortodontia, mas os clínicos são resistentes em aceitar novos conceitos que contradizem seus métodos preferidos de tratamento. **Objetivo:** Avaliar a concordância na indicação de tratamento interceptor das más oclusões de Classe II entre um grupo de formadores de opinião em nível internacional e um grupo de ortodontistas clínicos, e comparar a indicação de tratamento com os conceitos científicos contemporâneos. **Material e método:** Um questionário eletrônico composto por fotografias representativas de diversos graus de gravidade no acometimento da má oclusão de Classe II em crianças foi enviado a dois painéis de especialistas. Painel 1 (n=28) foi composto por ortodontistas internacionais autor os em revistas de elevado impacto, e o Painel 2 (n=261) foi composto por ortodontistas clínicos. Baseando-se em uma escala de Likert de 5 pontos, os ortodontistas indicaram suas opções de tratamento para cada um dos 9 casos apresentados. **Resultado**: As indicações de tratamento do Painel 2 foram estatisticamente diferentes daquelas ofertadas pelo Painel 1, com pelo menos 1 ponto de divergência no sentido de tratamento mais precoce. A indicação de tratamento ortodôntico interceptor do Painel 1 está de acordo com os conceitos científicos atuais. **Conclusão:** Tratamento muito precoce parece ser a tendência de conduta entre os ortodontistas clínicos, mas não entre os ortodontistas que estão academicamente envolvidos com a interceptação ortodôntica. Existe uma lacuna entre o conhecimento científico e a prática da Ortodontia.

Descritores: Má oclusão de Angle Classe II; terapêutica; questionários.

Abstract

Introduction: The adequate indications for the timing of treatment for Class II malocclusion are mandatory for the ethical and efficient practice of orthodontics, but clinicians are reluctant to accept new information that contradicts their preferred method of treatment. **Objective:** The aim of this investigation was to assess the agreement regarding the indications for Class II malocclusion interceptive therapy between a group of international opinion-makers on early treatment and a group of orthodontists and to compare their treatment indications with the current evidence-based knowledge. **Material and method:** An electronic survey containing photographs of mild, moderate and severe Class II malocclusions in children was sent to two panels of experts. Panel 1 (n=28) was composed of international orthodontists who had authored w ns on early orthodontic treatment, and Panel 2 (n=261) was composed of clinical orthodontists. Based on a 5-point Likert-type scale, the orthodontists selected their therapy option for each of the 9 Class II malocclusion cases. **Result:** The Class II malocclusion treatment recommendations of Panel 2 were significantly different from those offered by Panel 1 with a skew of at least 1 scale point toward earlier treatment. The Class II malocclusion treatment recommendations of the members of Panel 1 members were in accordance with contemporary evidence-based knowledge. **Conclusion:** Class II malocclusion overtreatment appears to be the tendency among clinical orthodontists but not among orthodontists who are academically involved with early treatment. There is a gap between the scientific knowledge and the practices of orthodontists.

Descriptors: Malocclusion, Angle Class II; therapeutics; questionnaires.

the degree of severity implied a dental trauma risk or a risk of myofunctional impairments during primary dentition (Case G), approximately 30% of the Panel 1 orthodontists recommended Class II malocclusion treatment. The overall frequency of malocclusion treatment recommendations from Panel 1 skewed toward conservative non-treatment approaches. The increase in the frequency of treatment recommendation during the late mixed dentition stage was in agreement with the literature because such

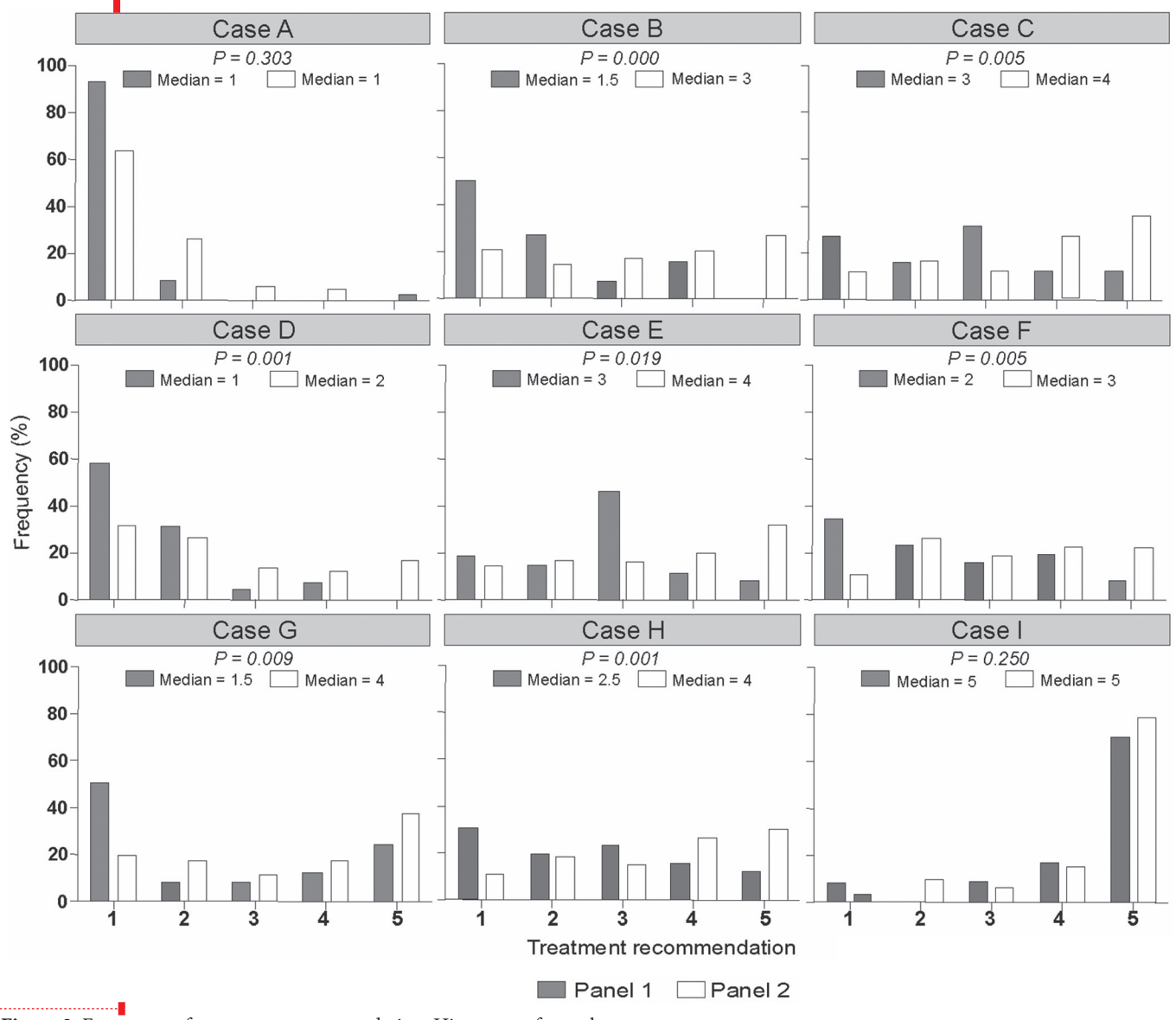

Figure 2. Frequency of treatment recommendation. Histograms for each case.

Table 2. Frequency (%) comparison and odds ratio of Class II treatment recommendation between panels according to studied categories

Category	Panel 1 (n=27)	Panel 2 (n=262)	Significance (chi-square test)	OR (95% CI)
Overall Class II	12%	50.8%	0.000***	6.6 (2.0-21.5)
Dentition				
Primary	11.5%	40.5%	0.004**	4.6 (1.4-15.1)
Early mixed	34.6%	62.6%	0.005**	2.8 (1.3-6.1)
Late mixed	68%	86.6%	0.013*	2.6 (1.2-5.7)
Malocclusion severity				
Mild	12%	55.7%	0.000***	7.9 (2.4-25.8)
Moderate	40%	61.1%	0.041*	2.1 (1.0-4.6)
Severe	60%	80.5%	0.016*	2.4 (1.1-5.2)

management protocols on the concepts they were trained on at an average of 14 years ago when the current evidence was not available. Sixty-one percent of the Panel 2 members recommended treatment during early mixed dentition. This finding suggests that if professionals do not overcome the barrier to acquiring new information, they will retain old paradigms. If orthodontists are not convinced that efficiency is an important attribute of the excellence of their practice, indiscriminate recommendation of early Class II malocclusion treatment may not be a concern. Another explanation might be related to differing professional decisions without explanatory factors related to such recommendations[18].

Health service delivery and clinical practice could be improved through the introduction of novel interventions with efficacies that are backed strong evidence[19]. However, the uptake and implementation of innovations in healthcare have often proven challenging and very slow in some cases. Consequently, research findings are not always translated into changes in clinical practice. Some authors have proposed that the adoption of new ideas is a process that is far more dynamic and complex than previously suggested by the classic innovation diffusion model of change, which proposes that the adoption of innovations is a rational and linear process. However, this model has been criticized for assuming a simplistic rational view of change and ignoring the complexities of this process including human cognitive limits and bounded rationality[20], cognitive dissonance, individual personalities and predispositions to change, culture (values, beliefs, habits and assumptions) and attitudes, and possible economic interests[21]. Economic reasons might motivate a clinician outside of an academic practice setting to initiate Class II treatment early. The fear of losing patients due to competition and pressure from parents may also explain such behaviors. Additional investigation on this topic should be conducted.

The gap between what we know and what we do is a very important theme that has been debated by health authorities over the last several years. The World Health Organization's Director-General stated that "Health work teaches us with great rigor that action without knowledge is wasted effort, just as knowledge without action is a wasted resource.[22]" We understand that additional interdisciplinary investigations are necessary to clarify the factors that contribute to the resistance of orthodontists to the abandonment of their earlier concepts and their acceptance of new scientific evidence-based information.

CONCLUSION

- The null hypothesis was rejected. Class II malocclusion overtreatment appeared to be the tendency of clinical orthodontists but not the orthodontists who were academically involved with publications related to interceptive orthodontics.
- The clinical orthodontists did not recommend Class II malocclusion treatment according to the contemporary evidence-based knowledge.
- The opinion-makers on interceptive orthodontics recommended Class II malocclusion treatment for growing patients in accordance with the scientific literature.

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