

Dispositivos de avance mandibular para Apnea obstructiva del sueño y su relación con Trastornos Temporomandibulares.

Mandibular advancement device for obstructive sleep apnea and its relationship with Temporomandibular Disorders.

Eduardo Flores¹, Macarena Muga¹, Andrés Ugalde²

RESUMEN

Objetivo: Analizar el estado del arte del dispositivo de avance mandibular (DAM) y su relación con la aparición de trastornos temporomandibulares (TTM). Objetivos específicos: Identificar el porcentaje de protrusión mandibular y su relación con TTM, y determinar el TTM más frecuente asociado a DAM.

Materiales y Método: Se realizó una búsqueda en los motores PubMed, Lilacs, Cochrane y Scielo con los términos "mandibular advancement device", "mandibular advancement splints", "Obstructive sleep apnea" y "temporomandibular disorders". Criterios de inclusión: 5 años, Humanos, Tipo de estudio, Idioma (Inglés/Español). Criterios de exclusión: No aborda TTM, Estudios en niños.

Resultados: La búsqueda arrojó 17 artículos, donde se eliminaron 2 duplicados y 7 por revisión manual de títulos y abstracts; de los 8 restantes, 3 se excluyeron por pauta PRISMA y los criterios de selección, obteniendo 5 estudios en total. Para el análisis, se determinaron los parámetros: Tipo de estudio, muestra, porcentaje de protrusión mandibular, presencia de TTM y conclusiones.

Conclusión: Los DAM demuestran ser seguros para el tratamiento de SAHOS, pese a generar fatiga y dolor muscular en el periodo inicial. Falta evidencia estadísticamente significativa que los asocie a TTM. A su vez, faltan protocolos que estandaricen los DAM y el porcentaje de avance mandibular.

1. Pregrado, Facultad de Odontología Universidad de Valparaíso, Chile.
2. Facultad de Odontología Universidad de Valparaíso, Chile.

VII Jornada Científica de Estudiantes de Odontología UV (Valparaíso, Chile)
Locación: Online
Año: 2020
Presentación Oral
 10 de octubre – 10:25 a 10:45 hr

Correspondencia:

Macarena Muga Massai

Correo electrónico:
 macarena.muga@alumnos.uv.cl

PALABRAS CLAVE:

Dispositivo de avance mandibular; Apnea obstructiva de sueño; trastorno temporomandibular

KEYWORDS:

mandibular advancement device; mandibular advancement splints; Obstructive sleep apnea; temporomandibular disorders

ABSTRACT

Objective

To analyze the state of the art of Mandibular advancement device (MAD) and its relationship with the presence of Temporomandibular Disorders (TMD).

Materials and Methods

A search was made using PubMed, Lilacs, Cochrane, and Scielo databases using the terms "mandibular advancement device", "mandibular advancement splints", "Obstructive sleep apnea", and "temporomandibular disorders". Inclusion criteria were articles published in the last 5 years on humans, language (English / Spanish). Exclusion criteria: Articles that did not address TMDs, Studies conducted on children.

Results

17 articles were found, 2 were duplicates, and 7 were eliminated by manual review of titles and abstracts; of the remaining 8, 3 were excluded by PRISMA regimen and the selection criteria, obtaining 5 studies. For the analysis, the parameters were: type of study, sample, percentage of mandibular protrusion, TMD presence, and conclusions.

Conclusion

MADs prove to be safe for the treatment of OSAHS, despite generating fatigue and muscle pain in the initial period. Statistically, significant evidence is lacking to associate them with TMD. Moreover, protocols that standardize MAD and the percentage of mandibular advancement are lacking.

REFERENCIAS

- [1] Bartolucci ML, Bortolotti F, Raffaelli E, D'Antò V, Michelotti A, Bonetti GA. The effectiveness of different mandibular advancement amounts in OSA patients: a systematic review and meta-regression analysis. *Sleep and Breathing*. 2016;20(3):911-9.
- [2] Kapur VK, Auckley DH, Chowdhuri S, Kuhlmann DC, Mehra R, Ramar K, Harrod CG. Clinical practice guideline for diagnostic testing for adult obstructive sleep apnea: an American Academy of Sleep Medicine clinical practice guideline. *Journal of Clinical Sleep Medicine*. 2017;13(3):479-504.
- [3] Alessandri-Bonetti A, Bortolotti F, Moreno-Hay I, Michelotti A, Cordaro M, Alessandri-Bonetti G, Okeson JP. Effects of mandibular advancement device for obstructive sleep apnea on temporomandibular disorders: A systematic review and meta-analysis. *Sleep Medicine Reviews*. 2019;48:101211.
- [4] Mehta NR, Correa LP. Oral appliance therapy and temporomandibular disorders. *Sleep Medicine Clinics*. 2018;13(4):513-9.
- [5] Alessandri-Bonetti G, Bortolotti F, Bartolucci ML, Marini I, D'Antò V, Michelotti A. The Effects of Mandibular Advancement Device on Pressure Pain Threshold of Masticatory Muscles: A Prospective Controlled Cohort Study. *Journal of Oral & Facial Pain & Headache*;30(3).
- [6] Knappe SW, Bakke M, Svanholt P, Petersson A, Sonnesen L. Long-term side effects on the temporomandibular joints and oro-facial function in patients with obstructive sleep apnoea treated with a mandibular advancement device. *Journal of Oral Rehabilitation*. 2017;44(5):354-62.
- [7] Nikolopoulou M, Aarab G, Ahlberg J, Hamburger HL, de Lange J, Lobbezoo F. Oral appliance therapy versus nasal continuous positive airway pressure in obstructive sleep apnea: A randomized, placebo-controlled trial on temporomandibular side-effects. *Clinical and Experimental Dental Research*. 2020 Apr 4.
- [8] Heidsieck DS, Koolstra JH, de Ruyter MH, Hoekema A, de Lange J. Biomechanical effects of a mandibular advancement device on the temporomandibular joint. *Journal of Cranio-Maxillofacial Surgery*. 2018;46(2):288-92.
- [9] Hammond RJ, Gotsopoulos H, Shen G, Petocz P, Cistulli PA, Darendeliler MA. A follow-up study of dental and skeletal changes associated with mandibular advancement splint use in obstructive sleep apnea. *Am J Orthod Dentofacial Orthop*. 2007;132:806-14.

- [10] Fernández GP, Delgado R, Castellanos JL. Alterations of sleep and bruxism. *Rev ADM*. 2018;75(4):187-95
- [11] Johal A, Arya D, Winchester LJ, Venn PJ, Brooks H. The effect of a mandibular advancement splint in subjects with sleep-related breathing disorders. *Br Dent J* 2005;199:591–6
- [12] Doff MH, Veldhuis SK, Hoekema A, et al. Long-term oral appliance therapy in obstructive sleep apnea syndrome: A controlled study on temporomandibular side effects. *Clin Oral Investig* 2012;16:689–97.
- [13] Valenzuela-Chaigneau Francisco, Field-Seisdedos Camila, Ugarte-Sánchez Fernando, Gracia-Abuter Benjamín. Repercusiones del uso de Dispositivos de Avance Mandibular como Terapia para el Síndrome de Apnea Obstructiva del Sueño en el Complejo Temporomandibular. *Revisión Narrativa*. *Int. J. Odontostomat*. 2018; 12(1): 7-14.
- [14] Aarab G, Lobbezoo F, Hamburger HL, Naeije M (2010) Effects of an oral appliance with different mandibular protrusion positions at a constant vertical dimension on obstructive sleep apnea. *Clin Oral Investig* 14:339–45