

Terapia de oxígeno hiperbárico en el manejo de osteonecrosis asociada a bifosfonatos: revisión bibliográfica

Hyperbaric oxygen therapy in the management of osteonecrosis associated with bisphosphonates: a bibliographic review

Andrea Contador¹, Nicolás González¹, Emilio Díaz², Pablo Milla²

RESUMEN

Objetivo: El objetivo de esta revisión es evaluar los beneficios del uso de terapia de oxígeno hiperbárico en pacientes tratados con bifosfonatos que padecan de osteonecrosis.

Materiales y métodos: Se realizó una búsqueda utilizando los términos Mesh “Hyperbaric Oxygenation” AND “Biphosphonates” OR “Osteonecrosis” en metabuscadores Medline, Cochrane Library y Embase. Se incluyeron estudios en humanos, inglés y con máximo de 5 años de antigüedad. Se excluyeron estudios en animales.

Resultados: De un total de 21 artículos, se incluyeron 12 que aportan al objetivo, de ellos 7 fueron revisiones sistemáticas, 4 revisiones de la literatura y 1 reporte de caso. Se observó en su mayoría, un efecto beneficioso del uso de OH como tratamiento complementario al manejo de osteonecrosis en pacientes con tratamiento de bifosfonatos.

Conclusión: La terapia de oxígeno hiperbárico en el manejo de osteonecrosis asociada a bifosfonatos mostró resultados prometedores al contrarrestar los efectos de la osteonecrosis, siendo una medida complementaria a otros tratamientos convencionales. Sin embargo, se necesita una mejor y mayor evidencia para respaldar estos resultados.

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

VII Jornada Científica de Estudiantes de Odontología UV (Valparaíso, Chile)

Locación: Online

Año: 2020

Presentación Oral

10 de octubre – 10:45 a 11:05 hr

Correspondencia:

Nicolás González.

Correo electrónico:
nicolas.e.gonzalez.g@gmail.com

PALABRAS CLAVE:

Oxigenación hiperbárica,
bisfosfonatos, osteonecrosis.

KEYWORDS:

Hyperbaric oxygenation,
bisphosphonates,
osteonecrosis.

ABSTRACT

Objective: To evaluate the benefits of the use of hyperbaric oxygen therapy in patients treated with bisphosphonates suffering from osteonecrosis.

Material and Methods: A search was carried out in Medline metasearch engines, Cochrane Library, and Embase using the Mesh terms "Hyperbaric Oxygenation" AND "Biphosphonates" OR "Osteonecrosis". Inclusion criteria were studies performed in humans, in English, and with a maximum of 5 years of antiquity. Animal studies were excluded.

Results: Of a total of 21 articles, 12 were included, of which 7 were systematic reviews, 4 literature reviews, and 1 case report. A beneficial effect of the use of HOT as a complementary treatment to the management of osteonecrosis was mostly observed in patients with bisphosphonate treatment.

Conclusion: Hyperbaric oxygen therapy in the management of bisphosphonate-associated osteonecrosis showed promising results by counteracting the effects of osteonecrosis, being a complementary measure to other conventional treatments. However, better and more evidence is needed to support these results.

REFERENCIAS

- [1] Fliebel R, Tröltzsch M, Kühnisch J, Ehrenfeld M, Otto S. Treatment strategies and outcomes of bisphosphonate-related osteonecrosis of the jaw (BRONJ) with characterization of patients: a systematic review. *Int J Oral Maxillofac Surg.* 2015;44(5):568-85.
- [2] Freiberger JJ, Padilla-Burgos R, McGraw T, Suliman HB, Kraft KH, Stolp BW, et al. What is the role of hyperbaric oxygen in the management of bisphosphonate-related osteonecrosis of the jaw: a randomized controlled trial of hyperbaric oxygen as an adjunct to surgery and antibiotics. *J Oral Maxillofac Surg.* 2012;70(7):1573-83.
- [3] de Souza Tolentino E, de Castro TF, Michellon FC, Passoni ACC, Ortega LJA, Iwaki LCV, et al. Adjuvant therapies in the management of medication-related osteonecrosis of the jaws: Systematic review. *Head Neck.* 2019;41(12):4209-28.
- [4] Sacco R, Leeson R, Nissan J, Olate S, Bettoni Cruz de Castro C, Acocella A et al. A Systematic Review of Oxygen Therapy for the Management of Medication-Related Osteonecrosis of the Jaw (MRONJ). *Applied Sciences.* 2019;9(5):1026.
- [5] Ceponis P, Keilman C, Guerry C, Freiberger JJ. Hyperbaric oxygen therapy and osteonecrosis. *Oral Dis.* 2017;23(2):141-51.
- [6] Costa DA, Costa TP, Netto EC, Joaquim N, Ventura I, Pratas AC, et al. New perspectives on the conservative management of osteoradionecrosis of the mandible: A literature review. *Head Neck.* 2016;38(11):1708-16.
- [7] Spanou A, Lyritis GP, Chronopoulos E, Tournis S. Management of bisphosphonate-related osteonecrosis of the jaw: a literature review. *Oral Dis.* 2015;21(8):927-36.
- [8] El-Rabbany M, Sgro A, Lam DK, Shah PS, Azarpazhooh A. Effectiveness of treatments for medication-related osteonecrosis of the jaw: A systematic review and meta-analysis. *J Am Dent Assoc.* 2017;148(8):584-94.e2.
- [9] Rao SS, El Abiad JM, Puvanesarajah V, Levin AS, Jones LC, Morris CD. Osteonecrosis in pediatric cancer survivors: Epidemiology, risk factors, and treatment. *Surg Oncol.* 2019;28:214-21.
- [10] Khan AA, Morrison A, Kendler DL, Rizzoli R, Hanley DA, Felsenberg D, et al. Case-Based Review of Osteonecrosis of the Jaw (ONJ) and Application of the International Recommendations for Management From the International Task Force on ONJ. *J Clin Densitom.* 2017;20(1):8-24.
- [11] Maritano J, Vergara M, Dib N, Preuss W, Naranjo R, Hernández P et al. Hyperbaric oxygen therapy as coadjvant treatment in patients with BONJ. *International Journal of Oral and Maxillofacial Surgery.* 2019;48:237.
- [12] Rollason V, Laverrière A, MacDonald LC, Walsh T, Tramèr MR, Vogt-Ferrier NB. Interventions for treating bisphosphonate-related osteonecrosis of the jaw (BRONJ). *Cochrane Database Syst Rev.* 2016;2:CD008455.
- [13] Vanpoecke J, Verstraete L, Smeets M, Ferri J, Nicot R, Politis C. Medication-related osteonecrosis of the jaw (MRONJ) stage III: Conservative and conservative surgical approaches versus an aggressive surgical intervention: A systematic review. *J Craniomaxillofac Surg.* 2020;48(4):435-43.