

ONJ UPDATE 2024

Torino, 24 febbraio 2024

Abstract Submission FORM

OSTEONECROSIS OF THE JAWS IN A PATIENT UNDER TREATMENT BY GUSELKUMAB: A NEW ETIOLOGICAL FACTOR FOR ONJ?

SECTION: 2A

AUTHORS (max 8): *Monica Marotta,¹ Paolo Boffano,^{1,2} Errico Prota,¹ Martina Ferrillo,⁴ Silvia Leone,¹ Mario Migliario^{1,3}

AFFILIATION:

1 Dentistry Unit, AOU "Maggiore della Carita", 28100 Novara, Italy;

2 Dentistry Unit, Department of Health Sciences, University of Eastern Piedmont, 28100 Novara, Italy;

3 Dentistry Unit, Department of Translational Medicine, University of Eastern Piedmont, 28100 Novara, Italy.

4 Department of Health Sciences, University of Catanzaro "Magna Graecia", Catanzaro, Italy

Background. Guselkumab is a human monoclonal antibody that specifically inhibits IL-23 by binding the cytokine's p19 subunit. Inhibition of upstream IL-23 signalling reduces downstream production of cytokines with established (TNF α) or emerging (IL-17 family) roles in inflammatory conditions such as psoriasis. It has also been postulated that IL-23 blockade, by transdifferentiating Th17 lymphocytes (probably central effector cells in psoriasis) into T-regulatory cells or Th1 cell populations, interrupts Th17 pathways that contribute to the chronic inflammation underlying the pathophysiology of many immune-mediated diseases, including inflammatory arthritis, psoriatic arthritis, and psoriasis. This drug seems to be efficacious and it seems to provide an acceptable benefit-risk profile in patients with active psoriatic arthritis who are naive to treatment with biologics.

The aim of this communication is to present and discuss a possible role of Guselkumab in the development of ONJ in a 67-year-old patient

Patients and methods.

A 67-year-old man had been on treatment with Guselkumab for psoriatic arthritis for 14 months. Past medical history was negative for other diseases. The assumption of bisphosphonates or antiresorptive drugs was not reported. In September 2023, the patient was referred to the Dentistry Department for the assessment of a suspected bone exposure in correspondence of maxillary incisor region. The patient had undergone the extraction of the left maxillary central incisor in July 2023.

Results.

Clinical intraoral examination revealed the presence of necrotic bone exposure in the region of the left maxillary central incisor. Panoramic and CT scan radiograph confirmed the presence of an irregularly healed post-extraction socket of tooth 21, with a small area of necrotic bone that was classified as MRONJ stage 1.

A surgical intervention of bone sequestrectomy under local anesthesia was proposed. Following the patient's acceptance and informed consent, under local anesthesia, a necrotic bone sequestrectomy together with curettage was performed. Reabsorbable sutures were placed. Postoperative healing was uneventful. At 3 months follow up, no bone exposure or necrotic bone could be appreciated.

Conclusions.

The present case could represent and describe a possible new etiological factor for Medication related osteonecrosis of the jaws. Further studies are needed to investigate the possible relationship between Guselkumab and ONJ.

REFERENCES:

1. Mease PJ et al. Guselkumab in biologic-naïve patients with active psoriatic arthritis (DISCOVER-2): a double-blind, randomised, placebo-controlled phase 3 trial. *Lancet*. 2020 Apr 4;395(10230):1126-1136.
2. Boehncke WH et al. Guselkumab: the First Selective IL-23 Inhibitor for Active Psoriatic Arthritis in Adults. *Expert Rev Clin Immunol*. 2021 Jan;17(1):5-13
3. Sbidian E et al. Systemic pharmacological treatments for chronic plaque psoriasis: a network meta-analysis. *Cochrane Database Syst Rev*. 2022 May 23;5(5):CD011535