

# Medication Management of Jaw Lesions for Dental Patients



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## KEYWORDS

• Intralesional injections • Jaw lesions • Sclerosing agent • Giant cell lesion

## KEY POINTS

- Most pathologic lesions of the jaws or of oral mucosa are treated successfully by surgical interventions.
- For treatment of the central giant cell lesion, aneurysmal bone cysts (ABC), histiocytosis of the mandible, hemangioma, odontogenic keratocyst, Paget disease, oral submucous fibrosis (OSF), and oral lichen planus (OLP), medical management consisting of intralesional injections, sclerosing agents, and systemic bisphosphonates is as successful as surgical procedures with fewer complications.
- Medication management of jaw lesions involves the use of pharmacologic agents to modify, slow, or eradicate a pathologic process that is affecting the jaw.

Medication management of jaw lesions involves the use of pharmacologic agents to modify, slow, or eradicate a pathologic process that is affecting the jaw. For a majority of pathologic lesions seen in the jaws, surgical procedures are indicated and are curative. For large lesions, however, surgical procedures may have poor neurologic, functional, or esthetic results. Several alternative nonsurgical therapies, such as intralesional injections, the use of sclerosing agents, and bisphosphonates, have been described for the management of certain intrabony or mucosal diseases. This article discusses the treatment of jaw lesions that are amenable to localized drug treatment and the pharmacology of the agents used most frequently used (**Table 1**). Drugs that require systemic administration are only briefly presented. For completion, a few soft tissue lesions are also discussed.

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The authors have nothing to disclose.

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<b>Table 1</b> <b>Diseases amenable to treatment by intralesional injection and agents used</b>	
<b>Disease</b>	<b>Agents Used</b>
Central giant cell lesion	Corticosteroids, calcitonin, interferon alfa, bisphosphonates
ABCs	Ethibloc, calcitonin, aqueous calcium sulfate.
Histiocytosis of the mandible	Corticosteroids
Low-flow VM	Absolute ethanol, sodium morrhuate, sodium tetradecyl sulfate, ethanolamine oleate
Hemangioma	Corticosteroids, bleomycin, sodium morrhuate
Odontogenic keratocyst	Carnoy solution
Paget disease	Calcitonin, bisphosphonates
OLP	Corticosteroids
OSF	Corticosteroids, interferon gamma

The methods used to treat jaw lesions by pharmaceutical or chemical agents involve

- Intralesional injection
- Topical application
- Systemic administration

### **INTRALESIONAL INJECTION**

Intralesional injection is the direct delivery of medication into the body of the lesion. The purpose is to obtain a high concentration of the drug at the diseased site, with minimal systemic absorption. Intralesional injections are easily performed and are relatively safe. The operator must take into consideration, however, the anatomy of the area. Adjacent nerves should not be compromised and intravascular injections should be avoided.

### **CENTRAL GIANT CELL LESION**

The central giant cell granuloma (CGCG) was classified by the World Health Organization in 2005 as an aggressive idiopathic benign intraosseous lesion that occurs almost exclusively in the jaws. It is most frequently seen in young women (women:men ratio = 2:1) and typically presents in the second and third decades.<sup>1,2</sup> The lesion is osteolytic and histologically consists of multinucleated giant cells throughout a fibroblastic stroma that are often clustered around areas of hemorrhage.<sup>3</sup> Surgery (ranging from aggressive curettage to peripheral ostectomy to en bloc resection) is the most common treatment, but because of a high recurrence rate, alternative medical treatments have been introduced. The most widely used agents are corticosteroids, calcitonin, and interferon alfa. Both steroids and calcitonin affect the giant cells rather than the stromal cells, even though it may be the stromal cells (fibroblasts) that are the etiologic cells of CGCG and the giant cells only secondary or reactive. Glucocorticoid receptors and calcitonin receptors have been identified on both multinucleated giant cells and mononuclear spindle-shaped cells.<sup>4</sup>

#### **Steroids**

The rationale for using corticosteroids to treat CGCC was based on its histologic resemblance to sarcoid. Because corticosteroids have been effective in the treatment of sarcoid, it was thought that they may have a similar therapeutic effect on the CGCC.

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