



American Association of Oral and Maxillofacial Surgeons

November 1, 2015

FDA banned chemical shown to produce superior results in jaw tumor treatment

Keratocystic odontogenic tumors (KOTs) are benign, but locally aggressive cyst-like tumors that usually occur in the mandible (lower jaw). KOTs tend to invade adjacent tissues and have very high recurrence rates. The application of Carnoy's solution, a chemical solution composed of 60% ethanol, 30% chloroform, and 10% acetic acid, in conjunction with surgery, is known to reduce the rate of KOT recurrence.

An FDA ban in 2013 on the use of chloroform for compounding led a number of surgeons to adopt a modified Carnoy's solution (designated "Carnoy's MC" to distinguish it from the original solution containing chloroform, "Carnoy's CS") in the treatment of KOT.

Researchers in the Department of Oral and Maxillofacial Surgery, University of Michigan, conducted a study to determine the difference in recurrence rates of KOT between the use of the two Carnoy's solutions. Their findings are reported in "Significantly Decreased Recurrence Rates in Keratocystic Odontogenic Tumor with Simple Enucleation and Curettage Using Carnoy's Versus Modified Carnoy's Solution," which appears in the November 2015 issue of the *Journal of Oral and Maxillofacial Surgery*.

Researchers studied 44 KOTs patients who underwent surgery in conjunction with the use of Carnoy's CS, and 36 KOTs patients treated with Carnoy's MC. The recurrence rate was only 10% for the CS group as opposed to 35% for the MC group. The researchers concluded that a reduction of this magnitude in the KOT recurrence rate between the Carnoy's CS and MC groups could be considered by the FDA as justification for a clinical trial of Carnoy's CS in patients with KOT.

Read the complete study findings at 56810: *J Oral Maxillofac Surg* 73:2132-2135, 2015.

The Journal of Oral and Maxillofacial Surgery is published monthly by the American Association of Oral and Maxillofacial Surgeons to present to the dental and medical communities comprehensive coverage of new techniques, important developments and innovative ideas in oral and maxillofacial surgery. Practice-applicable articles help develop the methods used to handle dentoalveolar surgery, facial injuries and deformities, TMJ disorders, oral cancer, jaw reconstruction, anesthesia and analgesia. The journal also includes specifics on new instruments and diagnostic equipment and modern therapeutic drugs and devices.

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