



INAHTA Briefs

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Issue:	Should VA restrict use of the gel form of topical benzocaine used in dental practice because of reports about adverse events, especially methemoglobinemia, associated with the spray form in other clinical settings?
Title:	Brief Overview: Benzocaine-associated Methemoglobinemia in Dental Patients
Agency:	VA Technology Assessment Program, Office of Patient Care Services, Room D4-142, 150 S. Huntington Ave (11-T), Boston, MA 02130 Tel: 857-364-4469 Fax: 857-364-6587
Reference:	VA Technology Assessment Program Report, April 2006. www.va.gov/vatap
Aim:	To survey the literature on the existence and strength of an association between topical benzocaine use in dentistry and methemoglobinemia
Conclusions and results:	The searches yielded a total of 39 citations, of which nine were retrieved and seven ultimately abstracted as directly relevant to the review. The seven citations included two substantial case series and two case-control studies. TAP concluded that methemoglobinemia is an uncommon event that also can be associated with nitrates. Nitrates are ubiquitous environmental chemicals for which an association of methemoglobinemia with exposure has been more rigorously researched. Therefore, an association between methemoglobinemia and topical benzocaine as used in dentistry is insufficiently proven for it to be the basis of major clinical policy or formulary change in VA. Although FDA is aware of adverse events apparently related to benzocaine sprays, it is not planning action to remove the drugs from the market.
Recommendations:	The Office of the Assistant Under Secretary of Health for Dentistry recommended that topical benzocaine gel as used in dentistry be omitted from restrictions on benzocaine spray within VHA.
Methods:	TAP searched Medline and Embase from 1951 and 1974, respectively, to February 2006 using search terms for topical benzocaine, adverse reactions, complications, methemoglobinemia, dental, epidemiology, and specific study types such as case-control or cohort, the latter two for the added part of TAP's charge. TAP retrieved full-text articles for any English-language citations apparently relevant to a clinical dental setting (oral administration of topical benzocaine), published in dental journals, or contributing to the evidence for an association, along with relevant citations in the reference lists from initially retrieved articles. TAP applied an analytic framework that documented the existence and strength of an association between exposure and disease.
Further research/reviews required:	None stated.
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