PubMed Search
Advanced Help

Format: Abstract
Send to

Georgian Med News. 2011 Jan;(190):15-23.

Articaine - the best choice of local anesthetic in contemporary dentistry.

Nizharadze N[1], Mamaladze M, Chipashvili N, Vadachkoria D.

Author information

1 Tbilisi State Medical University, Dental clinic, Training and Research center "UniDent", Georgia.

Abstract

Local anesthesia forms the foundation of pain control techniques in clinical dentistry. Within the rich local anesthetic drugs available in dentistry for the prevention and management of pain 4% articaine solutions achieve highest level of anesthetic potency and lowest systemic toxicity in all clinical situations, prior to its superlative physicochemical characteristics and the pharmacological profile. These are - low lipid solubility, high plasma protein binding rate, fast metabolization, fast elimination half time; low blood level. Articaine inactivates in both ways: in the liver and the blood serum. It has good spreading through tissues. Thus, articaine seems to be the local anesthetic of first choice in tissues with suppurative inflammation, for adults, children (over 4), elderly, pregnant women, breastfeeding women, patients suffering from hepatic disorders and renal function impairment. In Articaine solutions (1: 200,000) epinephrine is in low concentration, thus in patients at high risk adverse responses are maximally decreased. In these patients articaine should be used with careful consideration of risk/benefit ratio. Articaine solutions must not be used in persons who are allergic or hypersensitive to sulphite, due to content of Sodium metabisulfite as vasoconstrictor's antioxidant in it. Incidence of serious adverse

effects related to dental anesthesia with articaine is very low. Toxic reactions are usually due to an inadvertent intravascular injection or use of excessive dose. To avoid overdoses maximum recommendation dose (MRD) must not be exceeded and aspiration test always performed prior all LA injections. In these article we introduce new graphs providing a quick and effect way to determine maximum LA dose. If the overdose reactions develop, adherence to the basic step of emergency management with end to a successful outcome in virtually all cases.

PMID: 21346262

[Indexed for MEDLINE]

Publication type, MeSH terms, Substances

Publication type

Review

MeSH terms

Adult
Anesthesia, Dental/methods
Anesthesia, Local/methods
Anesthetics, Local/administration & dosage*
Carticaine/administration & dosage*
Carticaine/chemistry
Dose-Response Relationship, Drug
Female
Humans
Pregnancy

Substances

Anesthetics, Local
Carticaine

You are here: NCBI > Literature > PubMed

Support Center

GETTING STARTED
NCBI Education
NCBI Help Manual
NCBI Handbook
Training & Tutorials
Submit Data

RESOURCES
Chemicals & Bioassays
Data & Software
DNA & RNA
Domains & Structures
Genes & Expression
Genetics & Medicine
Genomes & Maps
Homology
Literature
Proteins
Sequence Analysis

POPULAR
PubMed
Bookshelf
PubMed Central
BLAST
Nucleotide
Genome
SNP
Gene
Protein
PubChem

FEATURED
Genetic Testing Registry
GenBank
Reference Sequences
Gene Expression Omnibus
Genome Data Viewer
Human Genome
Mouse Genome
Influenza Virus
Primer-BLAST
Sequence Read Archive

NCBI INFORMATION
About NCBI
Research at NCBI
NCBI News & Blog
NCBI FTP Site
NCBI on Facebook
NCBI on Twitter
NCBI on YouTube
Privacy Policy