

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Ultracain D ohne Adrenalin 1.7 ml
40 mg/ml solution for injection

Ultracain D ohne Adrenalin 2 ml
40 mg/ml solution for injection

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1 ml solution for injection contains 40 mg articaine hydrochloride.

Ultracain D ohne Adrenalin 1.7 ml
1 cartridge with 1.7 ml of solution contains 68 mg articaine hydrochloride.

Ultracain D ohne Adrenalin 2 ml
1 vial with 2 ml of solution contains 80 mg articaine hydrochloride.

For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection.
Clear, colourless solution.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Local anaesthetic for infiltration and nerve block anaesthesia in dentistry. Ultracain D ohne Adrenalin 1.7 ml and Ultracain D ohne Adrenalin 2 ml are particularly suitable for short interventions in patients who are not allowed to receive adrenaline due to certain diseases (e.g. cardiovascular diseases or allergy to the excipient sulphite), as well as for the injection of small volumes (application in the front tooth region, in the area of the palate).

4.2 Posology and method of administration

A dose of approx. 1.7 ml per tooth or for two adjacent teeth is usually sufficient in infiltration anaesthesia. About 1–1.7 ml of solution should be injected for nerve block anaesthesia of the inferior alveolar nerve. A half to a full dose should be used for each subsequent injection.

In the case of articaine without adrenaline the maximum dose for an adult is 4 mg per kg of body weight.

Method of administration

Ultracain D ohne Adrenalin is intended for use in the oral cavity.

In order to avoid an intravascular injection, an aspiration test in two planes (rotation of the cannula by 90° or better by 180°) should always be carried out before the injection. The injection pressure must be adapted to how sensitive the tissue is.

Optimum safety against breaking glass and ensuring reliable functioning through the use of appropriate syringe racks. Damaged cartridges must not be used for injection.

Fresh, sterile syringes and cannulas are to be used for each injection to prevent infection (e.g. hepatitis transmission).

Simultaneous use of sedatives:

In patients receiving sedatives, reduction in the dose of local anaesthetics should be considered as they have a cumulative CNS depressant effect (see section 4.5).

4.3 Contraindications

Ultracain D ohne Adrenalin should not be used in cases of

- allergies to articaine (or other amide-type local anaesthetics) or any of the other excipients of this medicinal product as listed in section 6.1,
- severe cardiac pacing or stimulation system disorders (e.g. AV-Block II. or III., pronounced bradycardia),
- acute decompensated cardiac insufficiency (acute failure of cardiac output),
- severe hypotension,
- Patients with inadequately treated epilepsy

Intravenous use is contraindicated.

4.4 Special warnings and precautions for use

In patients with cholinesterase deficiency, the indication must be compelling, as prolonged, potentially increased effects can be expected.

Ultracain D ohne Adrenalin may only be used with particular caution in patients with

- Angina Pectoris,
- arteriosclerosis,
- blood coagulation disorders,
- severe kidney or liver dysfunction,
- history of epilepsy (see section 4.8),
- Myasthenia gravis treated with acetylcholinesterase inhibitors: The lowest dose sufficient for effective anaesthesia should be used.
- Porphyria: Ultracain D ohne Adrenalin should only be used in patients with acute porphyria if no safer alternative is available. Appropriate precautions should be taken in all patients with porphyria, as this medicinal product may worsen porphyria.

Injection into inflamed (infected) areas is not recommended (increased absorption of Ultracain D ohne Adrenalin with reduced efficacy).

The dose must be reduced in the case of hypoxia, hyperkalaemia and metabolic acidosis.

Adverse events such as agitation, anxiety, nervousness, muscle tremors or twitches, tinnitus, blurred or double vision, or speech disorders (dysarthria, logorrhoea) may be signs of CNS depression (see section 4.9).

It should be noted that when being treated with anticoagulant drugs (such as heparin or acetylsalicylic acid), the tendency to bleed is generally increased, meaning that accidental vascular puncture during local anaesthesia can lead to serious bleeding.

To avoid side effects, the following points should be adhered to:

- Use the lowest dose possible,
- carefully aspirate in two directions before injection (to avoid accidental intravascular injection).

The medicinal product is not suitable for long-lasting interventions (over 20 minutes) and major dental-surgical interventions.

No food should be consumed until the local anaesthetic has worn off.

Caregivers of young children should be made aware of the risk of accidental soft tissue injuries, as they may accidentally bite the inside of their mouths due to prolonged numbness.

Ultracain D ohne Adrenalin contains less than 1 mmol (23 mg) of sodium per ml, i.e. it is almost "sodium-free".

4.5 Interactions with other medicinal products and other forms of interaction

Other local anaesthetics:

Combinations of different local anaesthetics cause additive effects on the cardiovascular system and central nervous system. The toxicity of local anaesthetics is cumulative, independent of dosage. Caution should be exercised when using more than one local anaesthetic. In such cases it may be necessary to reduce the dose of local anaesthetics.

Sedatives (with a central depressant effect, e.g. benzodiazepines, opioids):

In patients receiving sedatives, reduction in the dose of local anaesthetics should be considered as they have a cumulative CNS depressant effect (see section 4.2).

4.6 Fertility, pregnancy and lactation

Pregnancy

There is no current data on pregnant women being exposed to articaine, except during childbirth. Experiments on animals do not suggest direct or indirect adverse effects of articaine on pregnancy, embryonic/foetal development, birth or postnatal development (see section 5.3). Articaine crosses the placental barrier to a lesser extent than other local anaesthetics. Serum concentrations of articaine measured in newborn babies were approximately 30% of maternal levels. During pregnancy, treatment with Ultracain D ohne Adrenalin should only be administered after a strict risk/benefit assessment is performed.

Breast-feeding

Due to the rapid fall in serum levels and rapid excretion, no clinically relevant amounts of articaine are found in breast milk. With short-term use, interruption of breastfeeding usually is not necessary.

Fertility

Animal experiments with articaine 40 mg/ml + epinephrine 0.01 mg/ml have shown no effect on fertility (see section 5.3). At therapeutic doses, no adverse effects on human fertility are anticipated.

4.7 Effects on ability to drive and use machines

After using Ultracain D ohne Adrenalin, the dentist has to decide when the patient can drive or operate machines again. Anticipatory anxiety and surgical stress can lead to a change in performance, although local anaesthesia with articaine did not cause any detectable deviation from normal driving ability in relevant tests.

4.8 Undesirable effects

The following categories are used as a basis for the frequency data on side effects:

Very common ($\geq 1/10$)

Common ($\geq 1/100$ to $< 1/10$)

Occasionally ($\geq 1/1,000$ to $< 1/100$)

Rare ($\geq 1/10,000$ to $< 1/1,000$)

Very rare ($< 1/10,000$)

Unknown (unable to estimate frequency with the available data).

Diseases of the immune system

Unknown: allergic or allergy-like hypersensitivity reactions. These may manifest as oedematous swelling and/or inflammation at the injection site, in addition to redness, itching, conjunctivitis, rhinitis, facial swelling (angioedema) with swelling of the upper and/or lower lip and/or cheeks, glottic oedema with globus sensation in the throat and difficulty swallowing, urticaria and respiratory problems up to and including anaphylactic shock, irrespective of the injection site.

Diseases of the nervous system

Common: Hypaesthesia.

Occasionally: dizziness.

Unknown:

- Paraesthesia² (persistent hypaesthesia, ageusia and dysgeusia) following mandibular nerve blockage or inferior alveolar nerve blockage.
- Dose-dependent (especially if the dosage is too high or if accidentally injected into a blood vessel) disorders of the central nervous system, Agitation, nervousness, stupor, drowsiness up to loss of consciousness, coma, respiratory disorders up to respiratory arrest, muscle tremor and twitching up to generalised convulsions.
- Nerve lesions can occur during any dental procedure if a faulty injection technique is used while administering local anaesthetics, and also due to the anatomical conditions at the injection site. In such cases, the facial nerve can be damaged and facial nerve palsy can occur. This can also lead to a reduction in taste sensitivity.

Psychiatric disorders

Unknown: Nervousness, anxiety, euphoric mood.

Eye diseases

Unknown: Visual disturbances (blurred vision, double vision, mydriasis, blindness) may occur during or shortly after injection of local anaesthetics in the head area. These are usually temporary.

Diseases of the outer and inner ear

Unknown: Hyperacusis, tinnitus

Cardiovascular diseases

Unknown: Hypotension, bradycardia, heart failure and shock (possibly life-threatening).

Diseases of the gastrointestinal tract

Common: Nausea, vomiting.

Unknown: Swelling of tongue, lip, gums or face, exfoliation (scaling)/ulceration of oral mucosa, stomatitis, glossitis, glossodynia, dysphagia, diarrhoea.

Diseases of the respiratory tract, chest and mediastinum

Unknown: Bronchospasm, asthma, dyspnoea, dysphonia (hoarseness).

Musculature and skeleton, connective tissue and bone diseases

Unknown: Neck pain, exacerbation of neuromuscular manifestations in Kearns-Sayre syndrome, trismus.

Description of selected side effects

² These neuronal dysfunctions may be accompanied by various sensory disturbances. Paraesthesia can be defined as spontaneous, unusual, normally non-painful sensations (for example, burning, stinging, tingling or itching) that occur beyond the expected duration of the anaesthesia. Most cases of paraesthesia reported after dental treatment are temporary and disappear within days, weeks or months. In persistent cases of paraesthesia, usually as a result of mandibular nerve blockage, these are characterised by slow, incomplete recovery or there is no recovery.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system:

Bundesinstitut für Arzneimittel und Medizinprodukte (Federal Institute for Drugs and Medical Devices)

Dept. of Pharmacovigilance

Kurt-Georg-Kiesinger-Allee 3

D-53175 Bonn

Website: www.bfarm.de

4.9 Overdose

Types of overdose

Local anaesthetic overdose is often used to refer to:

- absolute overdose
- relative overdose, such as:
 - unintentional intravascular injection or
 - unusually rapid absorption into the circulatory system or
 - delayed metabolism and delayed elimination of the active substances.

In the event of a relative overdose, symptoms usually appear in the patient within the first few minutes, whereas in the case of absolute overdose – depending on the injection site – signs of toxicity appear at a later time after the injection, depending on the injection site.

Overdose symptoms

In the event of an overdose (absolute or relative), excitability may be temporary or absent. The first signs can be drowsiness with transition to unconsciousness and respiratory arrest.

CNS stimulation: restlessness, anxiety, confusion, hyperpnoea, tachycardia, increase in blood pressure with flushing of the face, nausea, vomiting, tremor, twitching, seizures (including tonic-clonic convulsions).

CNS depression: dizziness, hearing impairment, loss of ability to speak, stupor, deep CNS depression, unconsciousness, coma, atony, vasomotor paralysis (weakness, pallor), dyspnoea, death from respiratory paralysis.

Other neurological manifestations: presyncope, syncope, headache, agitation, confusion, disorientation, speech disorders (e.g. dysarthria, logorrhoea), balance disorders (imbalance).

Respiratory manifestations: apnoea (cessation of breathing), bradypnoea, tachypnoea, yawning, respiratory depression.

Cardiovascular depression bradycardia, arrhythmia, ventricular fibrillation, drop in blood pressure, cyanosis, myocardial depression, cardiac arrest.

Ocular manifestations (mydriasis, blurred vision, accommodation disorders).

Acidosis increases the toxic effect of local anaesthetics.

Treatment for an overdose

Prior to administering the local anaesthetic, an adequate emergency kit with suitable equipment and medicines to perform resuscitation shall be provided to facilitate immediate treatment for respiratory and cardiovascular emergencies.

The severity of overdose symptoms should prompt doctors/dentists to implement protocols that incorporate the need for timely airway protection and assisted ventilation.

The patient's state of consciousness should be monitored after each local anaesthetic injection.

If there are signs of acute systemic toxicity, local anaesthesia must be stopped immediately.

If necessary, place the patient in a supine position.

CNS symptoms (convulsive seizures, CNS depression) must be treated immediately with adequate air support/ventilation and administration of anticonvulsants.

An optimal supply of oxygen to the blood, sufficient air supply, support of the circulatory system and treatment of acidosis are vital measures and can prevent cardiac arrest.

In case of cardiovascular depression (hypotension, bradycardia), appropriate treatment by administration of intravenous fluids, vasopressor and/or inotropic should be considered.

Children should receive a dose that is appropriate to their age and weight.

In the event of cardiac arrest, resuscitation measures (cardiopulmonary reanimation) must be initiated immediately.

These resuscitation measures should be continued over a longer period of time in the event of local anaesthetic intoxication. Early administration of a lipid emulsion as a non-specific antidote should be considered in the case of local anaesthetic intoxication.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Local anaesthetics; amides,
ATC-Code: N01BB08.

Ultracain D ohne Adrenalin 1.7 ml/2 ml are local anaesthetics of the acid amide type for terminal and nerve block anaesthesia. They are used when the addition of adrenaline is not required or is contraindicated. (Adrenaline constricts the blood vessels in the injection area and leads to localised blood loss and prolongs the effect of the local anaesthetic.) Articaine leads to a reversible inhibition of the excitability of vegetative, sensory and motor nerve fibres. The mechanism of action of articaine is thought to be the blocking of voltage-dependent Na⁺ channels at the nerve fibre membrane. The onset of effect takes place after 1 to 3 minutes; the effective duration of anaesthesia is approx. 20 minutes.

5.2 Pharmacokinetic properties

Articaine is 95% bound to plasma proteins in the serum. After intraoral submucosal application, the elimination half-life is 25.3 ± 3.3 min. Articaine is metabolised in the liver at a rate of 10%, but mainly by plasma and tissue esterases. Articaine is subsequently excreted renally, mainly as articaine acid.

In children, total exposure after vestibular infiltration anaesthesia is comparable to that of adults, but the maximum serum concentration is reached more quickly.

5.3 Preclinical safety data

Based on conventional studies on safety pharmacology, chronic toxicity, reproductive toxicity and genotoxicity, the preclinical data does not indicate any particular hazards to humans at therapeutic

doses. In supratherapeutic doses, articaine has cardiodepressant properties and may have vasodilating effects.

In embryotoxicity studies with articaine, neither increased foetal mortality nor malformations were observed at intravenously administered daily doses of up to 20 mg/kg (rats) and 12.5 mg/kg (rabbits).

In embryofoetotoxicity studies with articaine and epinephrine, no increased malformations were observed at daily doses of articaine up to 80 mg/kg (rats) and 40 mg/kg (rabbits) administered subcutaneously. In a study on fertility and early embryonic development in rats, no adverse effects on male or female fertility were observed under parentally toxic doses.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sodium chloride, water for injection, sodium hydroxide and hydrochloric acid (for pH adjustment).

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

3 years.

The remains of opened vials/cylinders should be disposed of.

6.4 Special precautions for storage

This medicinal product does not require special storage conditions.
Do not freeze.

6.5 Nature and contents of container

Ultracain D ohne Adrenalin 1.7 ml

Cartridge made of glass with an aluminium flanged cap and a rubber seal made of butyl rubber.

10 cartridges of 1.7 ml

50 cartridges of 1.7 ml

100 cartridges of 1.7 ml

1000 cartridges of 1.7 ml

Ultracain D ohne Adrenalin 2 ml

Glass vials.

10 vials of 2 ml

100 vials of 2 ml

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

No special requirements.

7. MARKETING AUTHORISATION HOLDER

Septodont GmbH
Felix-Wankel-Str. 9
D-53859 Niederkassel

8. MARKETING AUTHORISATION NUMBER(S)

<i>Ultracain D ohne Adrenalin 1.7 ml</i>	37037.01.00
<i>Ultracain D ohne Adrenalin 2 ml</i>	37037.00.00

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

04 June 1998/22 May 2003

10. DATE OF REVISION OF THE TEXT

February 2024

11. CONDITIONS REGARDING SUPPLY

Prescription only.