Lidocaine 10% Spray for IUC[1,2]

Lidocaine hydrochloride is effectively absorbed from mucous membranes and is a useful surface anaesthetic in concentrations up to 10%. It is generally safe hence available over-the-counter from pharmacies. The effect duration of lidocaine spray is estimated to last less than one hour. Systemic absorption can follow topical application of lidocaine, so the possibility of interactions should be borne in mind.

Severe interactions occur with beta-blockers, cimetidine and noradrenaline (synergistic) and antiretrovirals (they increase exposure to lidocaine); lidocaine increases cardiovascular risks in those with heart disease and risks of convulsions in diazepam users; lidocaine should be used with caution in patients receiving other local anaesthetics or agents structurally related to amide-type local anaesthetics e.g. anti-arrhythmics such as mexiletine, and anti-arrhythmic class III e.g. amiodarone. Avoid lidocaine in cardiac, hepatic and renal impairment; use plain mepivacaine (Scandonest®) instead.

Mode of administration

Lidocaine 10 mg per 1 actuation (depression of the spray nozzle of the pump spray canister)

Dose and site of administration

Up to 4 sprays (40mg) is recommended for application to the cervix prior to IUC fitting
Maximum dose is 20 sprays (200mg).

Recommended procedure for administration

Visualise the cervix using a speculum and wipe clean with gauze if required. Wearing a new pair of non-sterile gloves, assemble the local anaesthetic (LA) spray unit by attaching a new nozzle to the Lidocaine 10% spray bottle. Apply up to 4 actuations/sprays of LA to the anterior cervical lip. It may take a few depressions of the head of the spray nozzle before the LA begins to come out, and the nozzle held ~10cm away from the cervix tends to achieve farther reach and wider spread. Allow 3 minutes for the applied LA to take effect. Detach the nozzle and remove gloves, discard these in clinical waste. Wear a new pair non-sterile gloves to clean the spray bottle using wipes and place aside away from the procedural area to air dry. Lidocaine 10% spray is a non-sterile solution and one study reported vaginitis in half of recipients. So it is recommended to wipe the cervical os clean and vagina dry with wool before continuing with the IUC procedure. After handwashing post procedure, the spray bottle should be put back in its box and returned to pharmacy.

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Potential side effects and patient information	**Actions in the case of severe side effect(s) or adverse reaction(s)**
Lidocaine (Xylocaine©) Spray has minor influence on the ability to drive and use machines, a dose dependent very mild effect on mental function and may temporarily impair locomotion and co-ordination. When used for surface anaesthesia rapid and extensive absorption may result in systemic side effects. Systemic adverse reactions may result from hypersensitivity, allergic reactions, idiosyncrasy or reduced tolerance on the part of the patient. Reactions involve the central nervous system (CNS) and/or the cardiovascular system. CNS effects include nervousness, dizziness, drowsiness, convulsions, unconsciousness and respiratory arrest. Cardiovascular reactions are depressant and may be characterised by hypotension, myocardial depression, bradycardia, cardiac arrhythmias, myocardial depression and possibly cardiac arrest	• Seek appropriate emergency advice and assistance. • Follow routine practice for managing allergic and anaphylactic reactions as appropriate • Document in the individual's clinical record and inform duty doctor • Complete incident procedure if adverse reaction is severe (refer to Trust policy) • Use yellow card system to report serious adverse drug reactions directly to the Medicines and Healthcare products Regulatory Agency (MHRA). Yellow cards are available in the back of the BNF or obtained via Freephone 0808 100 3352 or online at www.yellowcard.mrha.gov.uk.
Precautions • Adrenaline and oxygen must be available in case of any severe side effect(s) or adverse reaction(s) • Avoid contact with eyes • Avoid in patients with a history of local/topical lidocaine use affecting their mental function, locomotion or coordination if they will be driving afterwards or their return journey is long and to be done alone. Alternatively, they could avoid such activity for one hour after lidocaine use. • Individual to return to clinic if she has any concerns	**Documentation in records** • Local anaesthesia used and patient advice (including possible side effects) given beforehand • Dose and form administered • Batch and expiry date details • Signature/name of staff who administered the medication • Details of any adverse drug reaction and actions taken if applicable
Contraindications • Known hypersensitivity to Lidocaine Hydrochloride or other anaesthetics of the amide type • Individual who has received a previous maximum dose of local anaesthetic within 4 hours • Under 16 years of age and assessed as not competent using Fraser guidelines • The threads of an existing intrauterine contraceptive cannot be seen (for replacements) • Complete heart block or heart rate below 60 bpm or hypovolaemia • Porphyria • Inflammation or infection of the tissues where the spray is to be applied - the effect of local anaesthetics maybe increased or reduced if the spray is applied to traumatised, inflamed, damaged or infected area(s). Increased local anaesthetic absorption increases the possibility of systemic side effects, and local anaesthetic effect may also be reduced by altered local pH.	**Use with caution in patients with:** • Epilepsy • Impaired hepatic function • Impaired respiratory function • Severe renal dysfunction • Cardiac conduction disturbances, congestive heart failure, cardiovascular disease or heart failure, post cardiac surgery, bradycardia • Severe shock • Myasthenia gravis • Patients in poor health or who are debilitated. • Taking antiarrhythmic drugs class III (e.g. amiodarone) should be closely monitored. • Anticoagulated patients who are not within their desired INR range • Bleeding disorders

1. BMJ Group and the Royal Pharmaceutical Society of Great Britain. *British National Formulary.*
2. Xylocaine 10mg Spray Summary of Product Characteristics.