



NICE Bites

Clopidogrel and modified-release dipyridamole for the prevention of occlusive vascular events

NICETA 210; 2010

This guidance is a re-appraisal of clopidogrel and dipyridamole MR for the prevention of occlusive vascular events. It replaces NICE TA90; 2005.

Definition of terms

MR	modified-release
PAD	peripheral arterial disease
MI	myocardial infarction
AF	atrial fibrillation
TIA	transient ischaemic attack
CI	contraindicated

Guidance

- ◆ This guidance applies to people who:
 - > have had an occlusive vascular event or,
 - > have established PAD.
- ◆ This guidance **does NOT** apply to people who:
 - > have had, or are at risk of stroke associated with AF,
 - > require treatment to prevent occlusive events after coronary revascularisation or carotid artery procedures.

Prescribing

- ◆ This guidance recommends significant changes to prescribing – see **Box 1**.
- ◆ People currently receiving dipyridamole MR or clopidogrel either alone or in combination with aspirin outside the recommendations in this guidance should be given the option to continue until they and their clinicians consider it appropriate to discontinue treatment.
- ◆ Treatment with clopidogrel should be with the cheapest licensed preparation i.e. generic clopidogrel.
- ◆ This guidance does not restrict the length of therapy for any treatment regimen. This includes treatment with dipyridamole MR plus aspirin for people who have had an ischaemic stroke or a TIA which was previously limited to 2 years' duration from the most recent event.

Implementation tools

Support tools to help put this guidance into practice are available at: www.nice.org.uk/guidance/TA210.

Box 1.

Recommendations on prevention of occlusive vascular events

Ischaemic stroke

- ◆ **First-line** - give clopidogrel* monotherapy. **N**
- ◆ Give dipyridamole* MR + aspirin** **ONLY** if:
 - > clopidogrel is CI or not tolerated, **OR**
 - > to continue treatment in patients already receiving this combination.
- ◆ Give dipyridamole* MR monotherapy **ONLY** if aspirin **AND** clopidogrel are CI or not tolerated. **N §**

TIA

- ◆ **First-line** - give dipyridamole* MR + aspirin**.
- ◆ Give dipyridamole* MR monotherapy **ONLY** if aspirin is CI or not tolerated. **N §**
- ◆ Clopidogrel is not recommended for people who have had a TIA as it does not have UK marketing authorisation for this indication.

PAD or multivascular disease

- ◆ **First-line** - give clopidogrel* monotherapy. **N §**

MI

Following initial management according to [NICE CG94: Unstable angina/NSTEMI](#) or [NICE CG48; MI: Secondary prevention](#) then:

- ◆ Give aspirin monotherapy.
- ◆ Give clopidogrel* monotherapy **ONLY** if aspirin is CI or not tolerated.

§ **Editorial note** – Although not discussed in this guidance, aspirin monotherapy would only be used if dipyridamole and/or clopidogrel are CI or not tolerated.

* See Summary of Product Characteristics for full prescribing information.

** A combination preparation (*Asasantin[®] Retard*) is available.

N New recommendation.

Prucalopride for the treatment of chronic constipation in women

NICE TA 211; 2010

- ◆ Review previous laxative treatment before starting prucalopride.
- ◆ Prucalopride is recommended for the treatment of chronic constipation in women who have no relief of symptoms despite receiving treatment with at least two laxatives, each from a different class:
 - > at the highest tolerated recommended doses,
 - > for at least 6 months, **and**
 - > invasive treatment is being considered.
- ◆ Prucalopride should only be prescribed by a clinician with experience in treating chronic constipation.
- ◆ If treatment is not effective after 4 weeks:
 - > reassess the woman and consider if there is any benefit in continuing prucalopride.

Sedation in children and young people

NICE CG112; 2010

This guideline covers the management of sedation in infants, children and young people aged under 19 years.

Levels of sedation

- ◆ **Minimal sedation** – patients are awake and calm and respond normally to verbal commands.
- ◆ **Moderate sedation** – patients are sleepy but respond purposefully to verbal commands or light tactile stimulation.
- ◆ **Conscious sedation** – as for moderate sedation, except verbal contact is always maintained with the patient. Commonly used in dentistry.
- ◆ **Deep sedation** – patients are asleep and cannot be easily roused but do respond purposefully to repeated or painful stimulation. Patients may need assistance to maintain a patent airway.

Preparing for sedation – see algorithm in full guideline.

Assessment

- ◆ Trained healthcare professionals should carry out a pre-sedation assessment and document results.
- ◆ Establish suitability for sedation by assessing current medical condition and surgical problems, weight, past medical problems (including any associated with previous sedation or anaesthesia), current and previous medication (including allergies), physical status (including the airway), psychological and developmental status.
- ◆ Seek specialist advice before giving sedation if:
 - > there is concern about a potential airway or breathing problem,
 - > the child/young person is assessed as American Society of Anesthesiologists grade 3 or greater,
 - > the patient is a neonate or infant.
- ◆ Choose the most suitable sedation technique based on: what the procedure involves, target level of sedation, contraindications, side effects, patient/parent/carer preference, staff training.
- ◆ During sedation ensure that:
 - > two trained healthcare professionals are available to deliver and monitor sedation,
 - > immediate access to resuscitation and monitoring equipment is available.

Fasting and psychological preparation – see full guideline.

Choosing sedation technique – see Table 1.

Prescribing

- ◆ Some prescribing recommendations in this guideline are for indications, ages or at doses outside the UK marketing authorisation for the drug i.e. 'off-label'. See full guideline for further details.
- ◆ For deep sedation the following may be used only under the supervision of a specialist:
 - > ketamine, propofol, potent opioids e.g. fentanyl.

Cautions and counselling

- ◆ Give the child/young person and their parents/carers verbal and written information on:
 - > proposed sedation technique,
 - > alternatives to sedation,
 - > associated risks and benefits.
- ◆ Obtain and document informed consent.

Monitoring

Continuously monitor, interpret and respond to changes in all of the following:

- ◆ For **moderate** (excluding nitrous oxide) and **deep** sedation monitor:
 - > depth of sedation,
 - > respiration,
 - > oxygen saturation,
 - > heart rate,
 - > pain, coping, distress.
- ◆ For **deep** sedation *also* monitor:
 - > three-lead electrocardiogram,
 - > end tidal CO₂,
 - > blood pressure every 5 minutes.

Discharge planning

- ◆ Before discharge ensure that:
 - > vital signs have returned to normal,
 - > the child/young person is awake or returned to baseline level of consciousness, and there is no risk of further reduced level of consciousness,
 - > nausea, vomiting and pain have been adequately managed.

Training – see full guideline

- ◆ All healthcare professionals involved in sedation should have adequate knowledge and practical experience of delivering sedation and appropriate life support skills.

Table 1. Choice of sedation technique

Procedure	First-line	Second-line
Painless imaging	Do NOT routinely use ketamine or opioids	
	chloral hydrate ^a (for children <15kg) OR midazolam ^b	propofol ^c OR sevoflurane ^d S
Painful procedures e.g. suture laceration, orthopaedic manipulation	For all children, consider using a local anaesthetic as well as a sedative	
	To achieve <i>minimal/moderate</i> sedation give: nitrous oxide ^e (in oxygen) AND/OR midazolam ^b	ketamine ^c S OR intravenous midazolam ^b with or without fentanyl ^f S to achieve <i>moderate</i> sedation. If the above methods are unsuitable use: propofol ^c S with or without fentanyl ^f S
Dental procedures	For a child/young person who cannot tolerate a dental procedure with local anaesthetic alone, use: nitrous oxide ^e (in oxygen) OR midazolam ^b	If first-line treatment is unsuitable: refer to a specialist team for an alternative sedation technique
Endoscopy - Upper GI - Lower GI	Give intravenous midazolam ^b to achieve <i>minimal or moderate</i> sedation	
	Give fentanyl ^f (or equivalent opioid) in combination with intravenous midazolam ^b to achieve <i>moderate</i> sedation S	

^a Unlicensed for sedation in painless procedures in children/young people, however used in practice. Refer to BNF for Children for doses.

^b Unlicensed for premedication/conscious sedation in children <6 months. Refer to BNF for Children for doses and licensed indications.

^c See Summary of Product Characteristics for full prescribing information.

^d Unlicensed for sedation. Licensed for use in anaesthesia in children/young people.

^e Licensed for use in sedation in children/young people. Refer to BNF for Children for doses.

^f Unlicensed for children <2 years. Refer to BNF for Children for doses.

S Specialist sedation technique with reduced margin of safety. Specialist use only.