

HK12 Quinine for Nocturnal Leg Cramps

Long term use for leg cramps is not recommended by MHRA.

Aim

To Improve safety and quality of Quinine prescribing by identifying patients prescribed quinine for nocturnal leg cramps with a view to stopping treatment with quinine where appropriate.

Background/Summary

- Quinine is an alkaloid that occurs naturally in the bark of the cinchona tree. Historically, it has been used for fever, leg cramps and malaria.
- Quinine is very toxic in overdose and difficult to treat, causing irreversible blindness, life-threatening arrhythmias and convulsions. This is a quality and safety intervention based on safety advice issued by the [MHRA in November 2017](#).
- Long term use of quinine for leg cramps is not recommended by MHRA.
- Quinine is not a routine treatment for nocturnal leg cramps and should only be considered when cramps cause regular disruption of sleep.
- Quinine is effective in reducing the frequency of nocturnal leg cramps by about 25% in ambulatory patients.
- Quinine should only be considered when cramps are very painful or frequent; when other treatable causes of cramp have been ruled out and where non-pharmacological measures have not worked (e.g. passive stretching exercises). Quinine sulphate tablets are the preferred formulation.
- After an initial trial of 4 weeks, treatment should be stopped if there is no benefit.
- Treatment should be interrupted at intervals of approximately 3 months to assess the need for further quinine treatment.
- In patients taking quinine long term, a trial discontinuation should be considered.
- Further information [can be found in the NICE Clinical Knowledge Summary](#)

Guidance for Action

- *Establish how this project will be actioned with the GP:*
- *Ensure GP agreement is completed (see appendix 1).*
- *Agree method of communication with patients (MOT/Practice to contact patient or GP to handle consultation).*
- Run a report on the clinical system to identify patients with Quinine (either sulphate/bisulphate) tablets on repeat template and review in accordance with GP agreement (as recorded in Table 1).
 - If there is an unclear indication for prescribing refer to GP or Practice/PCN pharmacist.
 - If patient notes are incomplete or ambiguous about treatment benefit, the MOT pharmacist will contact patient to discuss frequency/severity of nocturnal leg cramps.
 - **Consider QT prolongation.** Quinine has dose-dependent QT-interval-prolonging effects and should be used with caution in patients with risk factors for QT prolongation (e.g. taking other medicines that could prolong the QT interval) or in those with atrioventricular block. Highlight the patient for the GP to further review.



- **If treatment is discontinued**, patient will need to be informed over the phone and a letter to the patient should be sent with self-care advice (see below).
- **Review other medication:** If treatment is discontinued and they are taking interacting medication (i.e. warfarin, digoxin) the letter should advise them to attend for a blood test (warfarin or digoxin level) 1-2 weeks from time of stopping and how to do this.
- **Provide Self Care advice to patient where appropriate**
 - **Reassure the person** that idiopathic leg cramps are common; they have no underlying cause and can resolve spontaneously.
 - **To alleviate an attack**, advise stretching and massaging the affected muscle(s). For example, upon calf cramps straighten the leg and dorsiflex the ankle or walk around on the heels for a few minutes.
To help reduce the frequency of attacks:
 - **Do stretching exercises of the affected muscle(s) three times a day.** If beneficial, continue indefinitely at an acceptable frequency.
 - **Calf exercises:** stand 1 metre from a wall. Lean forward with the arms outstretched to touch the wall and keep the soles of the feet flat on the floor. Hold for 5 seconds; repeat the exercise for 5 minutes, three times a day, especially before going to bed.
 - **When sleeping, try to stop toes from pointing downwards.** For example, if lying supine prop, the feet up (using a pillow), or if prone hang the feet over the end of the bed. Keep blankets loose.
 - **Consider using analgesia if the muscle(s) is tender after a cramp.** It is impractical to use analgesia during a cramp, as most attacks are short lived

References

1. NICE Clinical Knowledge Summary: Leg Cramps. February 2018. Accessed via <https://cks.nice.org.uk/leg-cramps>
2. Medicines Health and Regulatory Agency (MHRA): Quinine: not to be used routinely for nocturnal leg cramps. MHRA December 2014. Available at <https://www.gov.uk/drug-safety-update/quinine-not-to-be-used-routinely-for-nocturnal-leg-cramps>.
3. British National Formulary: Quinine. Accessed via <https://bnf.nice.org.uk> June 2020

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Appendix 1: GP Agreement

Table 1. GP/MOT member agreement: Review of Quinine for Nocturnal Leg Cramps

Reasons to stop treatment	GP agree to MOT member to stop (Y/N)	Require GP task (Y/N)	Contact patient (MOT/ Practice)
Repeated issues linked to malaria treatment			
If treatment has continued beyond four weeks and not benefit has been recorded			
If treatment has continued beyond four weeks and patient reports no benefit			
If benefit has been recorded, but patient treatment has not been interrupted within the preceding 3 to 6 months, start a trial discontinuation			
If the patient has experienced any of the following side effects: Tinnitus, impaired hearing, headache, nausea, disturbed vision, confusion, flushing, abdominal pain			
I give my authorisation for selected patients to stop their quinine treatment, under my direction, by the MOT representative			
GP name/signature:		Date:	
Practice: 			

