



April showers bring May flowers

PIC QUESTION OF THE WEEK: 4/05/10

Q: What are some of the current treatment options for nocturnal leg cramps?

A: Nocturnal leg cramps are episodes of painful involuntary muscle contractions that typically last from seconds to a few minutes. They occur during sleep and usually involve muscles of the calf and small muscles of the feet. The exact cause of nocturnal leg cramps is unknown; however, common triggers include overexertion of the muscle, standing on concrete, prolonged sitting, and dehydration. Although there appear to be no long-term complications associated with leg cramps, they can be bothersome and result in disruption of sleep patterns. Some patients report lingering tenderness and discomfort for hours after onset of an acute attack. Those affected most often are healthy middle-aged or elderly individuals. While their cause is generally unknown, there is some evidence to suggest that the risk of leg cramps may increase in patients with early-stage, asymptomatic peripheral vascular disease (PVD). Historically, the treatment of choice for leg cramps has been quinine. It was proposed to decrease nerve stimulation and increase the refractory period of skeletal muscle contraction. In 1994, the FDA banned sale of *non-prescription* quinine products due to multiple reports of serious adverse effects and a lack of evidence to support its efficacy. Qulaquin® (labeled for the treatment of malaria) is the only prescription quinine product now available and carries a Black Box Warning advising against its use for nocturnal leg cramps because the drug's risks outweigh its meager benefits. Minute amounts of quinine may be found in several herbal products and homeopathic remedies. Tonic water also contains a small quantity of quinine. There is little evidence to support the efficacy of quinine for leg cramps; however, many reports substantiate its potential toxicity. Medications that have been used to treat nocturnal leg cramps include carisoprodol, verapamil, diphenhydramine, benzodiazepines, and mexiletine. Supplements such as vitamin E, horse chestnut extract, and electrolytes such as calcium and magnesium have also been evaluated. None of these prescription medications or supplements has been proven efficacious in a large randomized trial. Currently, non-pharmacologic methods are the most effective form of treatment for patients with nocturnal leg cramps. This consists of proper hydration, stretching the calves throughout the day and night, massage, riding a stationary bicycle for several minutes before going to bed, and keeping blankets loose at the end of the bed to prevent toes from pointing downward. The best approach is to treat nocturnal leg cramps when they occur by straightening, massaging, and stretching the affected muscle until pain subsides.

References

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