

Journal Watch
QTc Interval Screening in *Methadone* Treatment.

Presented by Pratamaporn Chanthong, January, 21, 2010

Reference: Mori J. Krantz, MD; Judith Martin, MD; Barry Stimmel, MD; Davendra Mehta, MD; and Mark C.P. Haigney, MD

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Abstract: An independent panel developed cardiac safety recommendations for physicians prescribing *methadone*. **Methods:** Expert panel members reviewed and discussed the following sources regarding *methadone*: pertinent English-language literature identified from MEDLINE and EMBASE searches (1966 to June 2008), national substance abuse guidelines from the United States and other countries, information from regulatory authorities, and physician awareness of adverse cardiac effects.

Recommendation 1 (Disclosure): Clinicians should inform patients of arrhythmia risk when they prescribe *methadone*.

Recommendation 2 (Clinical History): Clinicians should ask patients about any history of structural heart disease, arrhythmia, and syncope.

Recommendation 3 (Screening): Obtain a pretreatment electrocardiogram for all patients to measure the QTc interval and a follow-up electrocardiogram within 30 days and annually. Additional electrocardiography is recommended if the *methadone* dosage exceeds 100 mg/d or if patients have unexplained syncope or seizures.

Recommendation 4 (Risk Stratification): If the QTc interval is greater than 450 ms but less than 500 ms, discuss the potential risks and benefits with patients and monitor them more frequently. If the QTc interval exceeds 500 ms, consider discontinuing or reducing the *methadone* dose; eliminating contributing factors, such as drugs that promote hypokalemia; or using an alternative therapy.

Recommendation 5 (Drug Interactions): Clinicians should be aware of interactions between *methadone* and other drugs that possess QT interval-prolonging properties or slow the elimination of *methadone*.

Strength: This study is produced by an expert panel included multidisciplinary members and specialists who reviewed the articles along with the mortality data from the meetings of CSAT.

Weakness: The searching strategies included only the English-language articles. Most of the articles came from the patients who used methadone as opioid addictions.

Relevance to palliative care: Methadone is an excellent pain medication especially for neuropathic pain control. This study reminds us to be aware of the possibility of cardiac complication from methadone, but there are still uncertainties as to what are the guidelines that are applicable to palliative setting. The risk of QT prolongation, the benefits of pain reduction and quality of life have to be measured and weighed against each other when prescribing methadone for pain control in the palliative care setting.