What is already known on this topic

Congenital colour vision defects are common, non-progressive, and untreatable disorders, for which screening is done so that affected children can be informed about occupations which require normal colour vision

Little population based work exists on the broader functional impact of these disorders

What this study adds

At a population level, colour vision defects confer no functional disadvantages in relation to educational attainment or unintentional injury—challenging the rationale for and value of screening

Contributors: JSR designed the study; PC did the analysis; and PC, JSR, and CSP interpreted the findings and wrote the paper. JSR is guarantor.

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Competing interests: None declared.

Ethical approval: Institute of Child Health's Research Ethics Committee.

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DRUG POINTS

QT interval increased after single dose of lofexidine

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Lofexidine (BritLofex, Britannia) is an α 2 agonist used for opioid detoxification.[1] We report one case of an increased QT interval after one dose of 0.4 mg lofexidine.[2]

A 44 year old white opiate dependent female enrolled in a protocol to assess the safety of taking daily lofexidine with daily methadone. She had no known drug allergies, took no other drugs, and had never taken lofexidine before.

An electrocardiogram before starting methadone showed sinus rhythm (70 beats/min) and QT/QTc 428/462 ms. After stabilisation on methadone at 80 mg a day, an electrocardiogram still showed sinus rhythm (67 beats/min) and QT/QTc 428/449 ms (fig). She was then given lofexidine with her daily dose of methadone, which was followed by brief hypotension (88/55 mm Hg) with mild drowsiness. Four hours after taking lofexidine, an electrocardiogram showed sinus bradycardia (58 beats/min), QT/QTc 612/601 ms, and blood pressure 149/88 mm Hg (fig). The participant was otherwise asymptomatic. Within 24 hours, QT/QTc was 372/432 ms. Laboratory work found no abnormalities. Echocardiography showed mild mitral regurgitation.

Three independent cardiologists interpreted that although there was some QT prolongation (QT range 510-560 ms; QTc range 501-560), the computer overestimated the interval because of U waves.

Increased QT interval with lofexidine has been seen in animals, but only at very high doses[3]; no clinically important changes have been seen in humans. Although high doses of methadone have been associated with changes in QT and arrhythmia,[4] the woman in this case had a normal QT interval while on methadone. The temporal relationship and lack of other causes indicate that the combination of lofexidine and methadone perhaps was the precipitant of this self limited change in QT.

In response, Britannia reported this event to the United Kingdom Committee on Safety of Medicines and added a warning to the summary of product characteristics (see www.lofexidine.co.uk). Before initiating lofexidine, clinicians may want to screen patients who might be at risk for repolarisation abnormalities.

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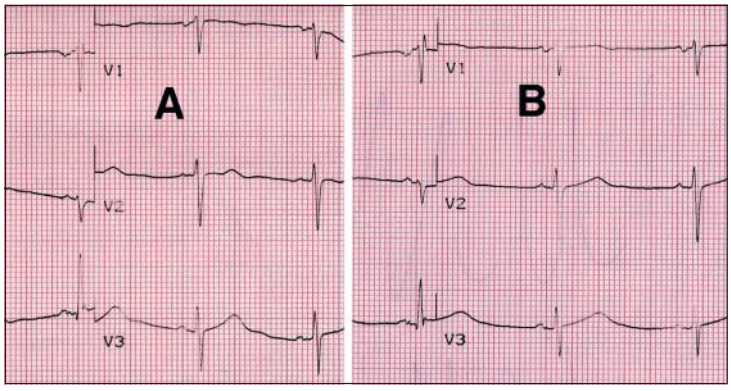

Electrocardiograms before (A) and after (B) taking lofexidine while stabilised on methadone