NHS Greater Glasgow & Clyde
Mental Health Services
Prescribing Management Group
Urgent Alert

Clarithromycin & QTc Prolonging Interactions

Background

The macrolide antibiotic, clarithromycin, carries known risks for prolonging QTc interval with associated risk of serious arrhythmias and sudden cardiac death.[1,2]

The summary of characteristics (SmPC EMC) for clarithromycin list several circumstances where the use of the drug is **contra-indicated** including

- Patients with a history of prolonged QTc or ventricular arrhythmias
- Patients with electrolyte disturbance.

Furthermore the SmPC **cautions** against the use of clarithromycin in the following circumstances

'*Prolonged cardiac repolarisation and QT interval, imparting a risk of developing cardiac arrhythmia and torsade de pointes, have been seen in treatment with macrolides including clarithromycin*'

- Patients with coronary artery disease, severe cardiac insufficiency, conduction disturbances or clinically relevant bradycardia.
- Clarithromycin must not be given to patients with hypokalaemia
- Patients concomitantly taking other medicinal products associated with QT prolongation[2].'

Significance in Mental Health

Many of the drugs (antipsychotics, antidepressants and mood stabilisers) used in mental health are known to be associated with a significant risk of QTc prolongation. The use of high dose antipsychotic therapy (HDAT guideline) also carries a significant risk of QTc prolongation. In addition the increased risk of cardiac illness in this population is also a significant factor.

Consequently the use of clarithromycin and other macrolides e.g. erythromycin is not recommended in the following circumstances

- **Patients on high dose antipsychotic therapy or taking haloperidol**
- **Patients with known QTc prolongation**
- **Patients on drugs with known risk of QTc prolongation.**

Other antimicrobials including ciprofloxacin and fluconazole may also carry this risk.

Advice on appropriate antibiotic choice can be obtained from microbiology and the clinical pharmacy service.

References:

1. The summary of characteristics (SmPC) for clarithromycin (EMC)
2. Credible meds

PMG (MH)

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