

Content validation of an algorithm for the assessment, management and monitoring of drug-induced QTc prolongation in the psychiatric population

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Background

- QTc interval prolongation (QTcIP) leads to serious complications making it a concern for all clinicians.
- Assessing the risk of QTcIP, especially in the psychiatric population, can present as a challenge for pharmacists and often results in cardiology referrals thus delaying treatment decisions.
- Based on an extensive literature review, an algorithm was developed for the assessment, monitoring and management of drug-induced QTcIP in the psychiatric population.

Objectives

- To determine the content validity of the algorithm from a panel of subject matter experts, including cardiologists, by rating the appropriateness of the algorithm steps and exploring its utility in clinical practice.

Methods/Materials

Purposive sampling of cardiologists

Qualitative semi-structured interviews (n=17)

Algorithm online orientation

Self-administered anonymous survey (n=12)

Results

Semi-Structured Interviews: Themes and Subthemes

Reliance on ECG readings

- Baseline and follow up ECG
- ECG monitoring

Clinically guided prescribing

- Patient's clinical/medication histories
- Drug interactions
- Drug information resources (i.e. BNF, Medscape, etc.)
- Unawareness of specific drug-induced QTcI resources (i.e. Credible Meds)

Limited availability of protocols

- No specific guidelines
- Lack specific clinical protocol
- Limited awareness or use of risk assessment scoring tools

Assessment for QTc prolongation

- History of QTc prolongation
- Medical and family history
- Physical signs and symptoms
- Clinical risk factors

Post-orientation Survey: Qualitative Results

Difficulties in ECG interpretation/calculation
Time consuming
Needs simplification
Clarify some scores/steps/cutoff-points
Cumbersome/Complicated
Should be used by pharmacists
Thorough
No barriers to use
Systematic
No concerns
Reliable
No weaknesses
Incorporate more evidence
Easily implemented
Easy to use
Doesn't consider gender in management

Post-orientation Survey: Quantitative Results

Average Mean Scores of Each Step of the Algorithm

Appropriateness Ranged from 3.08 to 3.67

Safety Ranged from 3.08 to 3.58

References Ranged from 3.17 to 3.75

Conclusion

- Interview results indicate that there's a lack of a unified protocol which supports the need for an algorithm.
- Survey findings show that a majority of cardiologists found the algorithm to be very reliable or reliable if minor alterations are made.
- Implementation of the algorithm could prove to be useful for the assessment and management of drug-induced QTcIP in the psychiatric population.