THE EFFECTS OF QTIELPINE ON EMOTIONAL PROCESSING

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Background

- Bipolar patients have been found to show impaired facial expression recognition and negative emotional processing biases during episodes of depression.
- Bipolar patients have been found to show biases towards both negative and positive emotional material during periods ofmania.
- Quetiapine, whilst developed as an atypical antipsychotic, has been shown to improve mood in bipolar patients.

Aim

To investigate the effects of one week quetiapine administration on the processing of emotional stimuli in healthy volunteers.

Participants

- 20 healthy volunteers received 150mg quetiapine XL (titrated over three nights in 50mg steps) for seven nights.
- 20 matched controls received placebo (with sham titration).

Methods

Facial expression recognition (Day 8)
- Emotional faces (Ekman & Friesen) were morphed with neutral faces in 10% increments and presented for 500ms.
- Assessed target sensitivity and response bias for classification of facial emotions (anger, disgust, fear, happiness, sadness, surprise).

Attentional vigilance faces dot-probe (Day 8)
- Dot-probe presented behind one (JACFEE/JACNeuF) face of fearful-neutral, happy-neutral, or neutral-neutral face pairs.
- Assessed attentional vigilance towards fearful and happy faces in masked and unmasked conditions.

Emotional word categorisation and memory (Day 8)
- Assessed accuracy and RT of categorisation of positive and negative self-referent personality characteristics (500ms).
- Assessed immediate recall memory.
- Assessed target sensitivity and response bias for recognition of previously presented words amongst novel distractors.

Results

Facial expression recognition
- Target sensitivity for facial expression recognition.
- Quetiapine group showed a trend towards reduced target sensitivity for detection of surprised faces ($F_{1,18}=3.875$, $p=0.057$).

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Emotional word recognition
- Assesssed immediate recall memory.
- Quetiapine group showed a trend towards greater response bias from happy to sad faces ($F_{1,18}=3.748$, $p=0.069$).

Conclusions

- Quetiapine administration was associated with emotional processing biases away from both positive and negative stimuli.
- Results are consistent with a mood stabilisation effect.
- Findings suggest one mechanism by which clinical effects of quetiapine may be mediated.
- Further research should investigate effects in bipolar patients.

References