Eliapixant (BAY 1817080), a P2X3 receptor antagonist, in refractory chronic cough: a randomised, placebo-controlled, crossover phase 2a study

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Shareable abstract (@ERSpublications)
The highly selective P2X3 antagonist eliapixant (BAY 1817080) significantly reduced cough frequency and severity in patients with refractory chronic cough. Mild taste-related adverse events were reported in 5–21% of patients, depending on the dose. https://bit.ly/3afVlVM

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Abstract

Background ATP acting *via* P2X3 receptors is an important mediator of refractory chronic cough (RCC). This phase 2a double-blinded crossover study assessed the safety, tolerability and efficacy of eliapixant (BAY 1817080), a selective P2X3 receptor antagonist, in adults with RCC attending specialist centres.

Methods In period A, patients received placebo for 2 weeks then eliapixant 10 mg for 1 week. In period B, patients received eliapixant 50, 200 and 750 mg twice daily for 1 week per dose level. Patients were randomised 1:1 to period A–B (n=20) or B–A (n=20). The primary efficacy end-point was change in cough frequency assessed over 24 h. The primary safety end-point was frequency and severity of adverse events (AEs).

Results 37 patients completed randomised therapy. Mean cough frequency fell by 17.4% *versus* baseline with placebo. Eliapixant reduced cough frequency at doses ⩾50 mg (reduction *versus* placebo at 750 mg: 25% (90% CI 11.5–36.5%); p=0.002). Doses ⩾50 mg also significantly reduced cough severity. AEs, mostly mild or moderate, were reported in 65% of patients with placebo and 41–49% receiving eliapixant. Cumulative rates of taste-related AEs were 3% with placebo and 5–21% with eliapixant; all were mild.

Conclusions Selective P2X3 antagonism with eliapixant significantly reduced cough frequency and severity, confirming this as a viable therapeutic pathway for RCC. Taste-related side-effects were lower at therapeutic doses than with the less selective P2X3 antagonist gefapixant. Selective P2X3 antagonism appears to be a novel therapeutic approach for RCC.

This article has supplementary material available from erj.ersjournals.com

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