INTRODUCTION

- Chemotherapy-induced nausea and vomiting (CINV) is a common and potentially debilitating side effect of cancer treatment.
- NK-1Rs are characterized by an acute (≤24 hours post chemotherapy) mediated by peripheral Substance P (SP) and delayed (24–120 hours post chemotherapy) mediated by activation of central serotonin (5-HT3) receptor (5-HT3RA).

METHODS

- Searches were conducted in the MEDLINE, Embase, and Cochrane library electronic databases.
- A systematic review was conducted to assess the availability of direct or indirect evidence for comparison of efficacy and safety of rolapitant with other NK-1Rs.
- Excluded by full paper review: 38
- Irrelevant treatment: 240
- Animal/in vitro study: 10
- Study design: 323
- Duplicate: 30
- Full papers: 22
- Hand-searched: 9

OBJECTIVE

- A systematic review was conducted to assess the availability of direct or indirect evidence for comparison of the efficacy and safety of rolapitant with other NK-1Rs.

RESULTS

- Across all RCTs, a total of 15,883 patients were randomized: the sample size of individual RCTs ranged from 12 to 584 patients.
- All RCTs evaluated rolapitant (n=17), fosaprepitant (n=1), netupitant/palonosetron (NEPA; n=1), and aprepitant (n=4).
- Forty-six RCTs were identified: 22 were randomized controlled trials (RCTs) involving 13,449 patients and 24 were non-randomized trials (21 were case reports).
- Twenty-four RCTs were conducted prior to the reclassification of anthracycline plus cyclophosphamide (AC) as HEC in 2011.
- Nineteen RCTs evaluated patients administered HEC (all cisplatin-based), 8 RCTs evaluated patients administered MEC, and 2 RCTs evaluated patients administered either HEC or MEC.
- Of the 46 RCTs evaluated, 37 RCTs evaluated patients administered HEC or MEC; and 9 RCTs evaluated patients administered either HEC or MEC (Figure 1).

CONCLUSIONS

- Our systematic review identified RCTs evaluating NK-1RAs for CINV prevention in patients undergoing chemotherapy with HEC or MEC.
- The absence of head-to-head trials evaluating rolapitant with other NK-1RAs precludes direct comparisons of these agents.
- A network meta-analysis to directly compare efficacy and safety of rolapitant with other NK-1RAs is ongoing.

REFERENCES


Table 1: CINV Endpoints Reported in RCTs Relevant to Indirect Comparison

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