

Assessing the influence of strontium ranelate on myocardial infarction: A systematic review

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Aims: The aim of this systematic review is to evaluate the significance of strontium ranelate on incidence and risk of myocardial infarction, within populations of osteoporosis patients. This review also aims to appraise existing literature to explore dissimilarities between data.

Methods: Between October-November 2023 a literature search was performed using the PubMed, Embase and Cochrane Library databases. 34 records reporting incidence of myocardial infarction from patients taking strontium ranelate were sourced. Following assessment against the exclusion criteria and critical appraisal using the critical appraisal skills programme checklist, 5 records remained eligible. Risk of bias was minimised using the Joanna Briggs Institute tool.

Results: A total of 3 cohort studies and 2 case-control studies were assessed. All 5 studies reported no statistically significant increased incidence or risk of myocardial infarction in patients taking strontium ranelate. There was no significant difference between patients taking strontium ranelate and patients taking other osteoporosis medications. Patients presenting with contraindications demonstrated an increased risk of myocardial infarction, but this was not significant.

Discussion: Patients taking strontium ranelate for osteoporosis do not have a significantly increased incidence or risk of myocardial infarction, compared to patients taking alternative osteoporosis medications. However, discrepancies between studies suggest that conclusions regarding the safety of strontium ranelate may still be inconclusive and further research into this field is warranted. Clinicians should remain cautious about the safety of strontium ranelate.

