**EFFECTIVENESS AND HARMS OF PHARMACOLOGICAL TREATMENTS FOR DELIRIUM IN ADULT INTENSIVE CARE PATIENTS AFTER CARDIAC SURGERY: A SYSTEMATIC REVIEW**

**Introduction:** Patients who undergo cardiac surgery are at high risk of delirium (incidence: 50-90%). Delirium has deleterious effects increasing the risk of death and adversely affecting recovery. Clinical interventional trials have been conducted to treat postoperative delirium pharmacologically including antipsychotics and sedatives. These trials have provided some evidence about efficacy and influenced clinical decision making. However, much reporting is incomplete and provides biased assessment of efficacy; benefits are emphasised and harms are inadequately reported.

**Objectives:** To synthesize the best available evidence about the effectiveness and harms of pharmacological interventions in the treatment of delirium in adult intensive care patients after cardiac surgery.

**Methods:** An a priori systematic review protocol was used. A comprehensive and systematic search, selection, quality appraisal and data extraction was conducted. The search included electronic databases (e.g. PUBMED, CINAHL), trial registries and reference lists of published studies. All study designs including adult patients, pharmacological intervention comparisons and outcomes (mortality, delirium duration/severity) were considered. Extracted study data included design, setting, intervention and outcomes. Study quality was assessed using the Joanna Briggs Institute methodology for effectiveness and the McMaster Quality Assessment Scale of Harms (McHarm). Two independent reviewers selected studies for inclusion, extracted data and performed critical appraisal.

**Results:** Three randomized controlled studies investigating morphine vs haloperidol, ondansetron vs haloperidol and dexmedetomidine vs standard care were included. Overall quality of these studies was poor. Main limitations were selective reporting, incomplete blinding and lack of group concealment. Due to heterogeneity and incomplete reporting a meta-analysis was not feasible and the quality of the studies did not allow practice recommendations to be made.

**Conclusion(s):** Definitive multicentre randomized controlled trails are required to examine the effectiveness and harms of pharmacological interventions to improve postoperative delirium. This would benefit critical care nurse-led interventions in delirium management ensuring patients receive the best possible treatment.