INTRODUCTION:

Children who undergo short, painful procedures at hospitals are given different kinds of pain relief (analgesics), often in combination with drugs for relaxation (sedatives). Nitrous oxide (NO) is a drug administered for pain relief and relaxation, it is applied by inhalation and its effects are analgesic, anxiolytic and sedative. It is used in several countries, but is not normally used as a sedation method for children in Norwegian hospitals, although widely used in maternity wards during labor. Our aim was to evaluate the effectiveness and safety of this sedation regimen in children. However, we also wanted to assess safety for health personnel after repetitive or long-term exposure.

METHODS:

We performed a systematic review on effectiveness and safety of nitrous oxide for sedation in children. For evidence on efficacy and safety in children, only randomized controlled trials (RCT) were included. For safety of health personnel we also accepted other study designs. For all endpoints, we presented the evidence in summary of finding tables.

RESULTS:

We retrieved twenty-two randomized controlled trials on the effectiveness or safety in children undergoing sedation with nitrous oxide. Outcomes were hospital procedure satisfaction or characteristics, and pain relief. Safety was reported as acute adverse events. None of the RCTs reported evidence on safety for health personnel. We are currently exploring different ways to systematically assess safety for health personnel within the form of an HTA otherwise designed for a different population.

CONCLUSIONS:

Assessing safety of new technologies, methods or procedures through HTAs is a crucial point. However, assessing the long-term safety of the health personnel should also be included, but evidence will often not be retrieved through literature search designed for the patient group, and long-term safety data is in general difficult to retrieve for exposure to a novel technology. We will discuss our approach to this challenge.

OP88 Reduction Of Biologics In Rheumatoid Arthritis: A Systematic Review

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INTRODUCTION:

Reduction of biologics after reaching low disease activity rheumatoid arthritis has been tested in clinical trials. The aim of this systematic review is to assess the effectiveness and safety of the reduction of biologics drugs in patients with rheumatoid arthritis in low disease activity.

METHODS:

The protocol of this review is registered at PROSPERO (CRD42017069080). We searched MEDLINE, Embase, Scopus and The Cochrane Library for randomized controlled trials that reduced or spaced the dose of biologics in patients at low disease activity or remission state compared with maintenance. Two researchers selected studies, extracted the data, and assessed the risk of bias of the studies. Random effects meta-analyses by DerSimonian & Laird method were calculated considering intention to treat analysis to obtain the standardized mean difference (SMD) or relative risk (RR) and 95 percent confidence interval (CI). Quality of evidence will be assessed by the Grading of Recommendations, Assessment, Development and Evaluation (GRADE).

RESULTS:

From 725 retrieved records, seven studies were included. Compared to regular doses, reduction of biologics significantly increased the health assessment quality (SMD = 0.20; 95% CI: 0.04 0.37; I^2 = 3.5%). No difference was observed for low disease activity (RR = 0.83; 95% CI: 0.68, 1.03; I^2= 71.3), serious and non-serious adverse events; disease activity scores; patient global assessment and radiographic progression.

CONCLUSIONS:

Preliminary results show no differences in clinically relevant outcomes from reduction of biologics compared to regular doses. As a limited number of studies is available, the certainty of evidence is limited and need to be monitored to better inform patients and clinicians.

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