Background and study aims

Kidney stones can become stuck in the ureter (the tube between the kidney and the bladder) in a condition known as renal colic. Patients with renal colic often attend the Emergency Department due to severe pain. Traditional painkillers are only partly effective in reducing this pain and have side effects. There is evidence that salbutamol (a drug used to treat asthma) relaxes the human ureter and this may reduce the pain. This is the first trial investigating this treatment for renal colic so the researchers have conducted a small study of 106 patients with the condition. The main aim is to see if salbutamol has any effect on the pain caused by kidney stones.

Methods

Participants were randomly allocated to receive an intravenous injection of either salbutamol (the active drug) or placebo (saline). Neither the patient nor the research team knew which drug was given. Information was collected about patients' pain levels over the following 24 hours, along with information on their vital signs, such as their heart rate to monitor the drug's effectiveness. Patients were still given all normal pain relief, both on their arrival and during their time in hospital.

Key findings

Salbutamol does not improve the pain of renal colic when given alongside normal pain killers to emergency department patients. Patients who received salbutamol had no difference in the amount of other pain relief required or the length of their hospital stay.

Dissemination

Study findings will be published in a peer-reviewed journal, presented at conferences and shared with relevant patient groups.

Patient and public involvement

Patients and members of the public were involved in the design of this study, and were part of the study management committee.

Conclusions and future plans

No further research is planned as a result of this study.