

Why did we do this trial?

Pain after an injury is common. The strongest pain killer that UK paramedics are currently allowed to administer is morphine. Unfortunately, morphine can be slow to work and may cause unwanted side effects. Because of this, it may not be the best pain killer for paramedics to use. Ketamine is another drug that acts very quickly and may have fewer unwanted side effects. However, we do not know if ketamine is any better than morphine. We did this trial to find out if ketamine was better than morphine.

What did we do?

Paramedics from 2 Ambulance Services recruited patients who had suffered a painful injury. If the patient agreed to take part, then the paramedic administered either ketamine or morphine. Neither the paramedic nor the patient knew which drug they would get. Before and after the drug was given, the paramedics asked the patient to rate their pain on a scale from 0 to 10, where 0 was no pain, and 10 was the worst pain imaginable. We used these pain scores to work out which drug worked best to reduce the patient's pain.

What did we find?

Ketamine did not work better than morphine. Both drugs reduced pain by roughly the same amount. However, ketamine worked a bit faster than morphine and caused more unusual behavioural reactions than morphine. Morphine lasted a for bit longer than ketamine but was more likely to cause a drop in blood pressure and more likely to cause breathing problems.

What do these results mean?

Ketamine is a suitable alternative to morphine that may be a bit safer to use than morphine, but it is not more effective at reducing pain overall.