Introduction:
Renal colic is a common disorder which presents with dramatic acute pain. Providing rapid relief, using effective pain control medications is the clinical priority to treat the patients. This study aims to compare the effect of IV Ketorolac versus Morphine in releasing renal colic pain by measuring pain severity and duration and also the need for additional doses.

Methods:
We performed a clinical pilot cohort study from during 2014 on patients with the clinical diagnosis of renal colic who recruited from the emergency department (ED) of Rasool-e-Akram Hospital and Firoozgar Hospital. Participants who were candidate to receive either Morphine or Ketorolac were divided into two groups who received either 30 mg Ketorolac IV or 5 mg Morphine. The pain was evaluated using the visual analog scale (VAS) at four time points: before drug injection (VAS-1), 20 minutes (VAS-2), 40 minutes (VAS-3), and 60 minutes (VAS-4) after injection. In cases when the pain was not controlled with the first injection of drug beyond 60 minutes; additional doses (rescue) were injected. Statistical analyses were performed using SPSS 21.

Results:
One-hundred-fifty patients treated with Morphine and 150 ones with Ketorolac were studied. The group treated with Morphine scored on average 9.91 before the injection, which was roughly 2.4 points higher than Ketorolac. Morphine reduced patients’ VAS scores more intensely (median: 10, IQR: 0 versus median: 6, IQR: 1; p value<0.001). In general, patients treated with Morphine were more likely to need a second (rescue) dose, when compared to Ketorolac group (38.6% vs 20%, p value= 0.001).

Conclusion:
Morphine is a better option for pain release in cases of renal colic. Ketorolac released the pain to an acceptable level; but, because of its slower action time, we recommend it in cases with moderate than severe pains.