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## A comparison of the effects of fentanyl, midazolam-fentanyl and pregabalin-fentanyl on the pain control in patients undergoing extracorporeal shock wave lithotripsy

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Extracorporeal shock wave lithotripsy (ESWL) was first used in the 1980s for renal and ureteral stones, which later became one of the main treatments for urinary tract stones. In order to have the patient's compliance, it's necessary to have a potent pain reliever with least side effects. For this purpose, different painkillers including opioids, NSAIDs, local anesthetics and combination of such drugs have been used. The aim of this study was to lower the need for opioids and to compare pain control and recovery period of fentanyl alone, in combination with midazolam and in combination with pregabalin. Among 141 patients, one third were given 4 mg fentanyl (10 minutes before the procedure), another group were given 2 mg fentanyl in combination with 1 mg midazolam and the other 47 patients were given 3 mg fentanyl in combination with 75 mg pregabalin (30 minutes before the procedure as it was used orally). The pain intensity was evaluated by numeric rating scale (NRS) before, during 1 hour and 2 hours after the procedure. Comparing these drugs show that using both midazolam and fentanyl can lessen the extra required dose of fentanyl, but increased recovery time due to midazolam mechanism of action, which was desirable for the patients as it decreased their stress but is not suitable for low health facility areas. Combination of pregabalin and fentanyl increased nausea and vomit before starting the procedure which was hard to tolerate for the patients. Using fentanyl alone, decreased recovery period and the patient's pain without requiring any other medications.

### Biography

Mohammad Safaei Saruei is a Senior Medical student. He is a member of Student Research Committee. He is a young enthusiastic researcher, eager to for on Urology and Radiology projects.

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