TRANSDERMAL FENTANYL PATCHES VERSUS SUBCUTANEOUS CONTINUOUS CONTROLLABLE DOSE INFUSION ELASTOMERIC PUMPS IN CANCER PATIENTS PAIN MANAGEMENT

Papaioannou E., Doka P., Maniati A., Schiza K., Papadopoulou E., Lampadariou A.
Department of Anaesthesiology and Pain Management, "Laikon" General Hospital of Athens

Aim of present study was the comparison between transdermal fentanyl patches vs subcutaneous continuous infusion elastomeric pumps in end stage cancer patients, pain management.

Material and Methods

In a randomized perspective study, 44 end stage cancer patients suffering from severe pain (VAS score >6) were assigned in two groups: (Group A, n=22 and group B=22). In group A patients transdermal fentanyl patches (dose according to age, weight, general condition, liver function and pain intensity) were prescribed, while in group B patients a subcutaneous. continuous, dose modified, elastomeric pump of 270 ml containing tramadol 100-300mg/24hr, parecoxib 40-80mg/24hr (depending on patients' renal function, clonidine 150mcg/24hr, ranitidine 100mg/24hr, and dexamethasone 8mg/24hr. Pain scores (according to VAS scale), patients' need for rescue analgesics (sublingual fentanyl tabets), side effects, and patients' collaboration were recorded.

Conclusion

Subcutaneous continuous infusion pump seems to provide better pain relief (lower pain scores), less need for extra analgesics and less side effects than transdermal fentanyl administration, which on the other side seems to be better tolerated and understood, by patients and their keepers.

Reference

1 .Oosten AW, Abrantes JA, Jönsson S, et al. Treatment with subcutaneous and transdermal fentanyl: results from a population pharmacokinetic study in cancer patients *J Clin Pharmacol.* 2016 Apr;72(4):459-67

Results

Patients' study in a three month period showed statistically significant ($p<0.005$) lower pain scores in group B: (1.6 ± 0.3) than in group A (2.7 ± 0.9) patients, and less need ($p<0.005$) for rescue analgesia (group A: $234\pm101\text{mcg}/24\text{h}$, and B: $76\pm32\text{mcg}/24\text{h}$ respectively. Side effects were also less in group B than group A: 16 patients demonstrated constipation and 11 nausea and vomiting, while one group B patient demonstrated local edema on infusion area, and 3 discontinued therapy due to lack of collaboration with the specific technique, even though they were visited by a specialized nurse daily to help and observe them. 2 group A and 4 group B patients died before the end of trial.