

EPIDURAL ANALGESIA WITH SUFENTANIL IN RELATION TO OPRM1 AND ABCB1 POLYMORPHISMS

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Genetic factors contribute to variable response to opioids. The aim of this study was to evaluate the association between rs1799971 (OPRM1), rs1045642, and rs2032582 (ABCB1) SNPs on pain relief with epidural sufentanil (1.5 µg/kg/day) in 69 patients after rectosigma resection for cancer. The basal clinical and demographic parameters in the study population were similar in the genotype subgroups. The median Summed Pain Intensity Difference (SD) for 0-48 hours after surgery (SPID 0-48) were not significantly affected by rs1799971, rs1045642, or rs2032582. There was a trend towards lower pain relief in patients carrying variant alleles in OPRM1 and ABCB1 in comparison with wild-type homozygous subjects. The median number of injections (SD) required by 118AA subjects 2.31 (1.36) was significantly lower in the comparison with 118AG 5.25 (3.13), ($\chi^2 = 9.75$, $p = 0.001$); correspondingly median drug consumption was significantly less in the 118AA group of 1.16 (0.79) defined daily doses (DDD) in the comparison with 118AG 2.14 (1.17) DDD, ($\chi^2 = 7.00$, $p = 0.008$). Opioid-induced adverse effects were observed in 15 % and 33 % of patients in 118AA and 118AG groups, respectively ($\chi^2 = 8.16$, $p = 0.004$). There was a trend towards higher required number of injections, higher number of DDD and higher opioid-induced adverse effects in patients carrying variant in ABCB1 in comparison with wild-type homozygous subjects. The median number of injections (SD) required by women and men was 3.30 (2.16) and 2.80 (1.59), respectively ($\chi^2 = 6.25$, $p = 0.012$). Opioid-induced adverse effects were observed in 26 % and 12 % of patients in women and men, respectively ($\chi^2 = 5.49$, $p = 0.011$). Other clinical conditions did not differ between genders. In addition, no significant impact was observed for age. Heterozygotes for rs1799971 (OPRM1) and women were more difficult to treat subpopulations that required higher doses of rescue analgesic medication and suffered more opioid-induced adverse effects.

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