

crispprd 1.0



Abstract

Grant Number: 5R01NR003923-08

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Project Title: GENDER AND SEX HORMONES AND OPIOID ANALGESIA

Abstract: *Gender differences in the efficacy of opioid analgesics in humans has not been examined despite a considerable amount of clinical literature on gender differences in pain sensitivity. However, data from our group suggest that gender differences in analgesic responses do occur. Recently, we showed that kappa-opioids produce significantly greater postoperative analgesia in females than in males. This finding was reproduced with three different opioid analgesics that are known to act predominantly at the kappa-receptor: pentazocine, nalbuphine, and butorphanol. We also observed that administration of the benzodiazepine antagonist flumazenil, as an adjuvant to morphine, produced significantly greater analgesia in females than in males again suggesting 1) the existence of a gender-specific factor that influences analgesic response, and 2) the involvement of GABAA receptors (i.e., the site of action of benzodiazepines) in this gender specific effect. Given these findings, we propose to evaluate the role of gender in influencing efficacy, maximal analgesic effect, and severity of side-effects of mu and kappa-opioid analgesics including an evaluation of the relationship between sex hormone levels and analgesic response. In addition, we will examine gender differences in 1) the amount of enhancement of analgesia or side-effects produced by co-administration of mu- and kappa-opioids, 2) the amount of enhancement of analgesia or side-effects produced by co-administration of a placebo (since placebo, at least in part, appears to be mediated by opioids). These studies will provide much-needed knowledge of gender differences in responses to opioids). These studies will provide much-needed knowledge of gender differences in responses to opioid analgesics and should lead to gender-specific recommendations for more effective, better targeted pain treatment.*

Thesaurus Terms:

analgesia, dental pain, gender difference, human therapy evaluation, opioid, postoperative state, sex hormone

GABA receptor, analgesic, drug adverse effect, menstrual cycle, morphine, opioid receptor, pain threshold

clinical research, human subject, young adult human (19-34)

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Fiscal Year: 2001

Department: ORAL AND MAXILLOFACIAL SURGERY

Project Start: 30-SEP-1994

Project End: 30-APR-2002

ICD: NATIONAL INSTITUTE OF NURSING RESEARCH

IRG: NURS

