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ABSTRACTS 1990

S S Al-JOMAA AND C A HENDRIE
Department of Psychology, University of Leeds, Leeds LS2 9JT

CORTICOSTEROID-INDUCED ANALGESIA INVOLVES BOTH OPIOID AND NON-OPIOID MECHANISMS.

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There is now clear evidence to suggest the involvement of corticosteroids in the modulation of opiate analgesia. However, much of this data has been derived from studies using adrenalectomised animals. Consequently, much less is known concerning the influence of corticosteroid manipulations in intact animals.

Initial studies were performed in DBA/2 mice and designed to examine the effects on nociception of Metyrapone (which inhibits the synthesis of corticosteriods) and Dexamethasone (a synthetic corticosteroid) administration per se.

Data revealed that Metyrapone induced weak analgesia at 1-20 mg/kg whilst more robust analgesia was produced by 160mg/kg. No analgesic effect was found with low doses of Dexamethasone but strong and long-lasting analgesia was produced by 100mg/kg. Metyrapone-induced analgesia was found to be naloxone insensitive whilst the effects of Dexamethasone were bi-phasic with the early phase (1hr post corticosteroid administration) being fully antagonised by naloxone and naltrexone and the later phase (>90 mins) being completely insensitive to these opiate antagonists.

These data suggest that inhibition of corticosteroid synthesis produces non-opioid analgesia, whilst corticosteroid administration activates both opioid and non-opioid analgesia mechanisms. The significance of these findings for our understanding of opiate analgesia systems remains to be determined.

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KOCH HJ
Leubeweg 47, 7906 Blaustein, FRG

RETROSPECTIVE ESTIMATION OF STATE ANXIETY AND REQUIREMENT OF PSYCHO-PHARMACOLOGICAL DRUGS DURING HARRINGTON SPONDYLODESIS

It is the task of a physician to reduce the state anxiety which accompanies surgical operations. The adequate anxiolytic pre- and postmedication or the conversation with the patient represent essential factors for the perioperative outcome (Tolksdorf,W. et al., Anaesth.Int.Care Med., vol.139). The spondylodesis is characterized by its temporal and spatial dimension. The aim of this study was to show in an exemplary manner the importance and extension of psychopharmcological treatment. 85 histories of scoliotic patients (mean age 21,4 y, f: 63, m: 22) who underwent the Harrington operation with neurolept anesthesia were retrospectively analyzed. The heart rate, as indicator of stress related sympathotonus, was elevated above 100 b.p.m. in 52 % of the patients a few minutes before starting the narcosis. Tachycardia was the dominating complication with an average increase of 20 %, postoperatively. 11 patients reacted with hypertensions above 160 mmHg after the operation. Diazepam was used as sedative premedication in 28,2 %. Trifluprомazine (21,2 %) and promethazine (21,2 %) were the preferred neuroleptics. Pethidine (61,2 %) and fentanyl (24,7 %) were the most frequently prescibed analgesics, preoperatively. During the postoperative phase 29,4 % of the patients needed diazepam and 23,5 % trifluprомazine, respectively. Nearly all patients received central analgesics for a limited time. In conclusion, the patients undergoing extended surgery tend to react with an increased sympathotonus, which cannot only be explained by physical irritations. In addition to the standard predmedication, most of the patients needed sedative and central analgetic drugs. Therefore, psychopharmacological care is an integral part of the perioperative management. Further investigations including the possible combination with psychotherapy are desirable.