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ABSTRACTS

Oral communications have a number prefixed C, poster communications P and demonstrations D. for oral communications with more than one author, an asterisk (*) denotes the one intending to present the work.

For subsequent publication in the Proceedings Supplement of the British Journal of Pharmacology, of those abstracts approved by the meeting, all corrections and alterations required by the authors or by the Society should be entered legibly in the Master Copy of abstracts at the Registration Desk. A camera-ready version of the corrected abstract must be sent to the Meetings Secretary within one week after the close of the meeting; failure to do this may mean non-publication of the abstract.

For subsequent publication in the proceedings section of the British Journal of Clinical Pharmacology, of those abstracts approved by the Clinical Section, all corrections and alterations should be entered legibly in the Master Copy of abstracts at the Registration Desk and made known to the Assistant Press Editor of the clinical journal.
EVIDENCE TO SUGGEST A DIFFERENTIAL INVOLVEMENT OF CORTICOSTEROIDS IN THE EXPRESSION OF OPIATE AND OPIOID ANALGESIA

C.A. Hendrie and S.S. Al-Jomaa* (introduced by R.J Rodgers), Pharmacochemistry Laboratory, Department of Psychology, University of Bradford, Bradford, BD7 1DP

Several lines of evidence now suggest that the NTS/corticosteroid axis may be involved in the expression of opiate/opioid analgesia. Of particular relevance in this context are data indicating that adrenalectomy and corticosteroids enhance opioid/opioid analgesia. Whilst these findings are strongly suggestive of a prime role for corticosteroids in the expression of opiate analgesia, it is necessary to examine the influence of the absence of corticosteroids per se before firm conclusions can be drawn.

For these studies 25-30 g DBA/2 mice were injected with the 11-8-hydroxylase inhibitor Metyrapone, which blocks the synthesis of corticosterone from 11-deoxy-corticosterone. In the absence of data concerning the effects of Metyrapone on baseline pain responding a series of titration studies were conducted to examine this. 30 min following drug administration (0-160 mg/kg Metyrapone) animals were assayed for tail-flick latency (TFL) at 15, 30, 45 and 60 min post-injection. Data were analysed by ANOVA which revealed a bi-phasic effect, with 160 mg/kg inducing significant analgesia and 1-20 mg/kg producing only weak and inconsistently reproducible analgesia. In the second series of studies the influence of Metyrapone on analgesia induced by 5 mg/kg morphine was studied. ANOVA revealed that 20-40 mg/kg potently and 0.1–1 mg/kg partially blocked this form of antinociception. Finally, although the analgesia induced by exposure to 35 bite attacks in a standard Resident-Intruder Paradigm is known to be opioid-mediated, Metyrapone was without effect. Data from these studies are summarised below.

<table>
<thead>
<tr>
<th>mg/kg Metyrapone</th>
<th>0.05</th>
<th>0.1</th>
<th>0.5</th>
<th>1</th>
<th>5</th>
<th>10</th>
<th>20</th>
<th>40</th>
<th>80</th>
<th>160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal</td>
<td>-</td>
<td>-</td>
<td>-*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Opioid</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Morphine</td>
<td>Partial</td>
<td>Partial</td>
<td>Partial</td>
<td></td>
<td>-</td>
<td>Block</td>
<td>Block</td>
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</tr>
</tbody>
</table>

- = no effect * = weak analgesia *** = potent analgesia

Current data demonstrate that Metyrapone has (i) biphasic effects on baseline pain sensitivity (ii) no influence on opioid analgesia at the doses thus far examined, yet (iii) fully blocks morphine analgesia at high and partially blocks this response at low doses. Thus, these data possibly suggest a difference in the mechanisms involved in the expression of opioid and opiate analgesia.