Published centrally after vagotomy and the dependent antidiuretic response is caused by ADH.

Further, the oliguria produced by adrenergic agents, atropine, ethylbenzatropine, completely blocking the effect of adrenergic receptors present in ADH release (3) since α-adrenergic and β-adrenoreceptors inhibit the


Sir,

Exogenous administration of oestrogen induces pronounced hyperaemia followed by uterine oedema. Both hyperaemia and oedema have been suggested to involve, and be mediated by, histamine (8,9). The uterine histamine concentration is significantly reduced during oestrus phase of the oestrous cycle (2,8,9) as also during oestradiol-induced oestrous (3,5,8). Further, parenteral administration of histamine induces pro-oestrus and oestrus, and concurrent administration of pyrilamine maleate results in a quiescent vaginal mucosa characteristic of dioestrus and metaestrus (4). Also, like histamine, the intraluminal application of oestradiol produces hyperaemia, vasodilatation and oedema in the uterus and antihistamines block these changes (9). Recently, parenteral administration of antihistaminic drugs has been found to significantly prolong the duration of oestrous cycle (6). These findings, therefore, suggest that the action of oestrogen is possibly mediated through the local release of endogenous uterine histamine.

The present work was undertaken to study the effect of antihistaminic drugs on the oestradiol-induced water imbibition in the uterus of rats.

Eighty immature healthy female albino rats (40-60 g) were divided into 5 groups of 21(A), 20(B), 5(C), 26(D) and 9(E) animals each. Oestradiol dipropionate (10 μg/rat) solution, prepared in arachis oil, was injected, i.p., daily, for 5 days, to all the rats except those of group A which received comparable volume of arachis oil and served as negative controls. Antihistaminic drugs (10 mg/kg) namely, mepyramine maleate, antazoline hydrochloride and diphenhydramine hydrochloride were injected, i.p., daily for 5 days in two divided doses (9.30 A.M. and 5.30 P.M.) to the rats of groups C, D and E respectively. Simultaneously, animals in group B received comparable volume (10 ml/kg) of normal saline, twice daily and served as controls. The animals were sacrificed 24 hr after the last injection of oestradiol and their uteri collected individually. The wet weight and the constant dry weight were recorded. The percent water content was calculated in terms of dry weight of the uterus. The data were statistically analysed by following the Duncan’s multiple range test (7).

From the results represented in Table I, it was observed that there was significant increase in the wet weight, dry weight and water content of the uterus. Mepyramine and diphenhydramine markedly reduced the oestradiol effect; but, this reduction was not statistically significant. Interestingly, however, antazoline significantly augmented the uterine response to oestradiol.

The results indicate that the prolongation of the duration of oestrous cycle by antihistamines reported earlier (6) is, probably, not due to the blockade of uterine hyperaemia or oedema induced by the oestrogens. Possibly, the antihistamines exert their action through the mecha-
TABLE I : Effect of antihistaminic drugs on oestradiol-induced changes in the rat uterus.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Arachis oil</th>
<th>Distilled water</th>
<th>Mepramine</th>
<th>Antazoline</th>
<th>Diphenhydramine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean wet weight of uterus (mg)</td>
<td>44.46±3.85</td>
<td>111.14±7.25</td>
<td>89.80±14.27</td>
<td>166.84±19.06</td>
<td>80.89±6.85</td>
</tr>
<tr>
<td>Mean dry weight of uterus (mg)</td>
<td>9.60±0.84</td>
<td>19.87±1.04</td>
<td>19.06±1.90</td>
<td>23.44±1.62</td>
<td>13.5±1.2</td>
</tr>
<tr>
<td>Mean water content of uterus (mg)</td>
<td>32.44±3.04</td>
<td>91.27±6.54</td>
<td>70.80±12.40</td>
<td>143.4±18.26</td>
<td>66.0±5.3</td>
</tr>
<tr>
<td>Percent water content of uterus</td>
<td>360.04±21.06</td>
<td>459.33±23.68</td>
<td>372.63±37.27</td>
<td>611.86±27.40</td>
<td>475.6±18.8</td>
</tr>
</tbody>
</table>

Values bearing the same superscript in the same row are not significantly different (P < 0.05).

nisms other than direct inhibition of water imbibition at the site of oestrogen action. In the doses used here, antihistaminics produce central nervous system depression. Incidentally, tranquillizers are known to prolong the duration of oestrous cycle in mice (1). The augmentation of uterine hyperaemic response to oestradiol by antazoline hydrochloride is an interesting observation and deserves further investigation.

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REFERENCES


LETTER TO THE EDITOR

EFFECT OF FENITROTHION

Sir,

Fenitrothion [O,O-dimethyl phosphorus insecticide, is extensively toxic and superior insecticide to phosphorus insecticides is close of cholinesterase. Binding of's to enzyme proteins appears the much higher concentrations than the bound enzyme, inhibition of permeability and thereby relaxation.

We have, therefore, studied in RBC and plasma of rats. The strain were randomized into six group served as controls. The group of fenitrothion over an area of 24 hr by giving incision in heparinized tube. Plasma and Magnesium was estimated in pair (1) and cholinesterase activity.

There was a significant further change. The cholinesterase activity showed a decrease up to 24 hr. The partial recovery of the enzyme sumably faster than the rate of decay became faster th

No relationship was e

However, in plasma a paral