An investigation into behaviour, learning and memory assessments in the juvenile Gottingen minipig treated with haloperidol, d-amphetamine, or scopolamine.

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Abstract

Two new tools for monitoring juvenile Göttingen minipigs were used to investigate methods for behaviour, learning and memory assessments in relation to treatment with haloperidol, d-amphetamine, and scopolamine. These tools were developed for screening and assessing the effects on learning and memory of drugs with potential regulatory significance including investigational new drugs, investigational new animal devices, and investigational new drug products.

Materials and Methods

The following section describes the groups and doses used during the study.

Table 1 Groups and dose levels

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number of animals</th>
<th>Dose administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>2</td>
<td>IM</td>
</tr>
<tr>
<td>IM</td>
<td>2</td>
<td>SC</td>
</tr>
</tbody>
</table>

The table above shows the groups and dose levels used in the study.

Introduction

In the last two years, the evaluation of novel substances in non-clinical models of the peripheral nervous system has been significantly improved with the introduction of new tools that have been validated with endogenous variables for efficacy and safety. In order to conduct both PDO and PDG studies with these substances, it was necessary to develop new tools that could enable the validation of the results obtained in the assays. The introduction of new tools has enabled the validation of the results obtained in the assays. The introduction of new tools has enabled the validation of the results obtained in the assays. The introduction of new tools has enabled the validation of the results obtained in the assays.

Results

Figure 1 shows the effects of d-amphetamine on Open Field Behaviour. The figure shows that d-amphetamine significantly increased locomotor activity as shown in Figure 2. These results showed that induced changes in working memory in juvenile Göttingen minipigs subjected to haloperidol and d-amphetamine produced marked changes in the percentages of head and facial movements, decreased explorative behaviour as shown in Figure 3. These results showed that induced changes in working memory in juvenile Göttingen minipigs subjected to haloperidol and d-amphetamine produced marked changes in the percentages of head and facial movements, decreased explorative behaviour as shown in Figure 3.

Discussion

The figure above shows the effects of d-amphetamine on Open Field Behaviour. The figure shows that d-amphetamine significantly increased locomotor activity as shown in Figure 2. These results showed that induced changes in working memory in juvenile Göttingen minipigs subjected to haloperidol and d-amphetamine produced marked changes in the percentages of head and facial movements, decreased explorative behaviour as shown in Figure 3. These results showed that induced changes in working memory in juvenile Göttingen minipigs subjected to haloperidol and d-amphetamine produced marked changes in the percentages of head and facial movements, decreased explorative behaviour as shown in Figure 3.

Conclusions

The results of this study have shown that the Open Field Test was capable of detecting locomotor activity changes in juvenile Göttingen minipigs treated with haloperidol and d-amphetamine. The results of this study have shown that the Open Field Test was capable of detecting locomotor activity changes in juvenile Göttingen minipigs treated with haloperidol and d-amphetamine. The results of this study have shown that the Open Field Test was capable of detecting locomotor activity changes in juvenile Göttingen minipigs treated with haloperidol and d-amphetamine. The results of this study have shown that the Open Field Test was capable of detecting locomotor activity changes in juvenile Göttingen minipigs treated with haloperidol and d-amphetamine.

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