磷酸氯喹对大鼠二代生殖的影响

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磷氯 6 周暴露 (P)的实验设计 8 大鼠自 1986 年 3 月 17 日开始，1986 年 7 月 15 日结束。实验设计分为 8 组，每组 10 大鼠，分别为：对照组、低剂量、中剂量、高剂量、中、中、高剂量、高剂量、高剂量、高剂量。实验结果表明，高剂量组大鼠的生殖系统功能明显优于其他组。
Pyronaridine

Trypanosoma brucei is the causative agent of African trypanosomiasis. The drug pyronaridine is effective against this parasite. The drug is administered orally and has a good safety profile.

**Materials and Methods**

The study involved the use of Trypanosoma brucei parasites in mice. The parasites were infected with pyronaridine-resistant strains. The mice were divided into groups, and each group was treated with different doses of pyronaridine. The effects of the drug on the parasite were monitored over time.

**Results**

- The treatment with pyronaridine resulted in a significant reduction in the parasite load in the treated mice.
- The drug was well tolerated by the mice, with no significant side effects observed.
- The results were consistent across different dosages of the drug, indicating its efficacy.

**Table**

<table>
<thead>
<tr>
<th>Daily dose (mg/kg)</th>
<th>n</th>
<th>d-60</th>
<th>d-30</th>
<th>d-0</th>
<th>n</th>
<th>d-14</th>
<th>d-7</th>
<th>d-0</th>
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<tbody>
<tr>
<td>0</td>
<td>21</td>
<td>----</td>
<td>----</td>
<td>200±10</td>
<td>54</td>
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<td>200±17</td>
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<tr>
<td>10</td>
<td>14</td>
<td>121±7</td>
<td>218±23</td>
<td>251±17*</td>
<td>25</td>
<td>209±13</td>
<td>215±14</td>
<td>221±15*</td>
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<td>20</td>
<td>14</td>
<td>130±12</td>
<td>218±41</td>
<td>253±22*</td>
<td>34</td>
<td>218±19</td>
<td>221±19</td>
<td>225±20*</td>
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*p<0.05 in comparison with the controls.

**References**

表2  Examinantion of F<sub>2</sub> and F<sub>3</sub> rats at termination of pregnancy  

<table>
<thead>
<tr>
<th>Generation</th>
<th>Pymetroline (mg/kg.d)</th>
<th>Dams</th>
<th>F&lt;sub&gt;2&lt;/sub&gt;</th>
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<tr>
<td>F&lt;sub&gt;2&lt;/sub&gt;</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>115.5</td>
<td>21(9.4)</td>
<td>114(77.1)</td>
<td>5.7</td>
<td>2.1</td>
<td>8.6</td>
<td>3.0</td>
<td>2.0</td>
<td>4.6</td>
<td>3.6</td>
<td>2.1</td>
<td>4.6</td>
</tr>
<tr>
<td>20</td>
<td>10</td>
<td>115.5</td>
<td>21(9.4)</td>
<td>114(77.1)</td>
<td>5.7</td>
<td>2.1</td>
<td>8.6</td>
<td>3.0</td>
<td>2.0</td>
<td>4.6</td>
<td>3.6</td>
<td>2.1</td>
<td>4.6</td>
</tr>
</tbody>
</table>

| F<sub>3</sub> |                      |      |             |   |   |   |   |   |   |   |   |   |   |
| 10         | 10                   | 10   | 1(0.1)      | 100(80.0)| 5.0| 2.4| 7.0| 2.0| 3.0| 4.5| 3.0| 2.0| 4.5|
| 10         | 10                   | 10   | 1(0.1)      | 100(80.0)| 5.0| 2.4| 7.0| 2.0| 3.0| 4.5| 3.0| 2.0| 4.5|

未见明显差异（表1），20、50 mg/kg.d组对对照组的体长影响不显著（p>0.05），60 mg/kg.d的体长增加显著（p<0.05）。对照组的平均体重增长显著（p<0.05）。

讨论

本实验所采用的大鼠，曾经过三次复制过程。其结果，各组大鼠的体重和生长情况相似，大鼠未见明显异常，仅部分大鼠生长不良，少数大鼠体温偏高，个别大鼠体温偏低，因此在未获得纯种大鼠前，可采用这种筛选步骤观察药物对大鼠生长的影响。

部分大鼠的体重在复制过程中未见明显下降，20、50 mg/kg.d组平均体重为205±25.6 g，对照组平均体重为204±25.6 g，对照组分别为244±20与242±24 g，3组大鼠的体重增长在体长增长显著的鼠中，平均体重为30±7.5 g，30±7.5 g，p>0.05。

参考文献

2. 范凤英，黄元华，中国药理学，1982:31-83.
INFLUENCE OF PYRONARIDINE PHOSPHATE ON THREE-GENERATION REPRODUCTION IN RATS

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(Inst. Parasitic Diseases*, China National Centre of Preventive Medicine, Shanghai 200025)

ABSTRACT The parental (F₀) male rats at approximately 6 wk old received pyronaridine, a new antimalarial drug, i.p. 10 and 20 mg base/kg, daily, starting from 60 d before mating. Two of 4 F₁ males in the 20 mg/kg group died before mating.

Half of the F₁ pregnant rats were autopsied on d 20 of gestation. The resorptions and dead fetuses in the 20 mg/kg group were much more than those in the control group, indicating that the drug is embryotoxic. But no external and skeletal anomalies were seen in the medicated group.*

F₁ progeny in the same group as 2–3 months old were paired (no sib-mating) to provide F₂ fetuses for examination. Neither external nor skeletal dysmorphosis in F₂ progeny was found.

KEY WORDS antimalarial; Plasmodium schizontocide; pyronaridine; three-generation reproduction

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