溴化二甲基环烯醇的降压机制

曾子江 陆建英 宋育明 胡正明 朱兴育

（南京医科大学附属鼓楼医院附科，南京 210024）

溴化二甲基环烯醇（vincristine dimethoxydiazobenzyl bromide，简称环烯醇）不仅有抗肿瘤作用（1），且有降压作用（2）。临床上用于外科手术中控制性降压，效果良好（3）。本文研究它的降压机制及对心脏的影响。

方法和结果

环烯醇系中国科学院上海药物研究所所供，批号为77009。

一、降压机制的分析

1. 药物选择

16犬注射后在压116±23

2. 实验方法

16犬的血压在注射前为116±23

3. 结果

16犬的血压在注射前为116±23

4. 讨论

从以上结果可以看出，环烯醇有明显的降压作用，这可能与它对血管的直接作用和对心脏的影响有关。
### Table 1. Effect of iv celycline dimethobromide 1 mg/kg and iv Arfonad 1 mg/kg on BP and blood histamine in dogs

<table>
<thead>
<tr>
<th></th>
<th>minutes after iv medication</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>9</th>
<th>15</th>
<th>25</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>arterial blood pressure (mm Hg)</td>
<td>100</td>
<td>100</td>
<td>90</td>
<td>80</td>
<td>70</td>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>arterial histamine (ng/ml whole blood)</td>
<td>15</td>
<td>30</td>
<td>45</td>
<td>60</td>
<td>75</td>
<td>90</td>
<td>105</td>
<td>120</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>Arfonad</td>
<td>100</td>
<td>100</td>
<td>90</td>
<td>80</td>
<td>70</td>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
</tbody>
</table>

Two dogs had a lower BP and were not responsive. All others had a significant increase in BP and histamine. Arfonad was more effective than celycline.

### Table 2. Hypertensive effects of electrical stimulation of nervi splanchnicus major after iv celycline dimethobromide in 10 anesthetized dogs, (X ± SD)

<table>
<thead>
<tr>
<th></th>
<th>Minutes after iv celycline dimethobromide</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>9</th>
<th>15</th>
<th>25</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP (mm Hg)</td>
<td></td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>45</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>g/n of BP after nerve stimulation (mm Hg)</td>
<td></td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
</tr>
</tbody>
</table>
HYPOTENSIVE ACTION OF CYCLEANINE DIMETHOBROMIDE

CAO Zi-en, SHEN jian-fan, SONG jia-zhen, HU Zhen-ming, ZHU Xing-zhong
(Department of Anesthesia, Affiliated Hospital of Nanjing Medical College, Nanjing 210024)

ABSTRACT The nervi splanchini major of 10 dogs were cut and the distal ends were stimulated. The hypertensive effect was markedly diminished or abolished after iv cycleanine dimethobromide 1—2 mg/kg. The hypotensive effect from the electrical stimulation at the distal ends of left vagi in 3 bilaterally vagotomized dogs was greatly diminished or abolished after iv 2—8 mg/kg.
The histamine levels in arterial blood of 9 dogs rose from 16 ± (SD) 6 ng/ml to 227 ± 208 ng/ml after iv 1 mg/kg.

Twelve rabbits were given iv the drug and monitored by ECG. In 2 rabbits SAB II' developed after 1 mg/kg (in 3 s), AVB III' and ventricular escape appeared in one and auricular extrasystole in the other rabbit. In 20 rabbits given 0.75 mg/kg in 3 s, only the sinus rates showed some diminution. Five min later an additional dose of 0.75 mg/kg was given iv in 3 s in 6 out of the 10 rabbits. All these 6 rabbits manifested SAB II', while 1 rabbit showed AVB I' and ventricular escape, and another rabbit developed ventricular extrasystole. In 2 rabbits the additional doses were 1.25 and 1.50 mg/kg, respectively and iv slowly in 50 min. The sinus rates decreased progressively.

The contraction amplitudes of 7 isolated rabbit hearts were not augmented or even diminished by cycloaneine dimethobromide 900 mg/l.

So the ganglionic blocking effect plays an important role in the mechanism of the hypotensive action.

KEY WORDS cycloaneine dimethobromide, hypotensive action; ganglionic blocking, histamine release; isolated rabbit heart, ECG