4.11: Beta-1 Agonists

Dobutamine is a Beta-1 agonist.

**Mechanism of Action:** Dobutamine stimulates Beta-1 receptors to increase heart rate, force of contraction, and conduction velocity.

**Indications:** Dobutamine is used to treat cardiogenic shock and severe heart failure to increase contractility and cardiac output.

**Nursing Considerations:** In IV administration, dilute concentration before administering. Continuously monitor electrocardiogram (ECG), blood pressure, cardiac output, and urine output during therapy. This drug can cause a marked increase in heart rate and blood pressure. Report all adverse reactions promptly, especially labored breathing, angina, palpitations, and dizziness.

**Patient Teaching & Education:** The patient should be instructed to inform the nurse immediately if they notice chest pain, shortness of breath, or numbness or tingling in the extremities. [1]

Now let's take a closer look at the dobutamine medication grid in Table 4.11. [2]

<table>
<thead>
<tr>
<th>Class/Subclass</th>
<th>Prototype/Generic</th>
<th>Administration Considerations</th>
<th>Therapeutic Effects</th>
<th>Side/Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta-1 agonist</td>
<td>dobutamine</td>
<td>Continuously monitor ECG, blood pressure,</td>
<td>Increases heart rate, force of heart contraction, and</td>
<td>Marked increase in heart rate and blood pressure</td>
</tr>
</tbody>
</table>

[1] [2]
cardiac output, and urine output during therapy  
speed of conduction between SA to AV nodes  

Report all adverse reactions promptly, especially labored breathing, angina, palpitations, and dizziness.

1. uCentral from Unbound Medicine. https://www.unboundmedicine.com/ucentral
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