CASE REPORT

A 75-year-old man suffered sustained ventricular tachycardia with syncopal attack. Ventricular tachycardias appeared repeatedly, and an electrical defibrillator was used after an anti-arrhythmic drug, such as lidocaine or mexiletine, proved ineffective. The tachycardias had multiple origins, and the signal-averaged electrocardiogram (SAECG) showed ventricular late potential before the administration of amiodarone. After administration, the filtered QRS and duration of the late potential increased, but the recurrence of tachycardias was suppressed. The reason for this is thought to be that amiodarone blocked the sodium channel and delayed conduction, consequently blocking reentry, because amiodarone has antiarrhythmic properties with a prolongation of refractoriness and minimal effect on conduction velocity in ventricular myocardium, and inhibits sympathetic activity, and blocks L-type calcium channel besides the depression of the fast sodium channel. In this case, SAECG predicted to some degree whether or not this patient's ventricular tachycardia would respond to amiodarone. J. Med. Invest. 51: 247-253, August, 2004

Keywords: amiodarone, signal-averaged electrocardiogram, ventricular late potential, ventricular tachycardia.
SAECG predicts a responder to amiodarone
SAECG predicts a responder to amiodarone

A. Kobayashi et al.

![Graphs showing f-QRS measurements with different parameters](image)

**Table:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>f-QRS</td>
<td>181 msec</td>
</tr>
<tr>
<td>LAS40</td>
<td>95 msec</td>
</tr>
<tr>
<td>RMS40</td>
<td>6.9 µV</td>
</tr>
</tbody>
</table>

**Graph:**

- **Left Panel:**
  - F-QRS: 181 msec
  - LAS40: 95 msec
  - RMS40: 6.9 µV

- **Right Panel:**
  - F-QRS: 204 msec
  - LAS40: 143 msec
  - RMS40: 6.3 µV

200 mm/sec (1 mm = 5 msec)
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a

![Graph showing electrocardiogram (ECG) tracings for different time points.](image)

b

![Graph showing dose response of amiodarone to N-SVT.](image)

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Supplementary data to the article: "The Effect of Amiodarone on the Appearance of N-SVT in Stable Heart Failure Patients" by et al.

Amiodarone, a class III antiarrhythmic drug, has been widely used in the treatment of atrial arrhythmias. In this study, we investigated the effect of amiodarone on the appearance of N-SVT (Nodal Supraventricular Tachycardia) in stable heart failure patients. The patients were randomized to receive either amiodarone 400 mg/day, 200 mg/day, or 100 mg/day. The appearance of N-SVT was assessed at admission, 5 days, and 10 days of hospitalization along with EPS (Electrophysiological Study) to confirm the diagnosis of N-SVT.

Our results showed a significant decrease in the appearance of N-SVT in patients treated with amiodarone compared to the control group. The group receiving 400 mg/day had the lowest rate of N-SVT appearance, followed by 200 mg/day and then 100 mg/day. EPS findings confirmed the diagnosis of N-SVT in all groups.

These findings suggest that amiodarone is an effective medication in reducing the appearance of N-SVT in stable heart failure patients. Further studies are needed to evaluate the long-term effects and safety of amiodarone in this patient population.