Follow-up Investigation of One Hundred and Eleven Cases of Trigeminal Neuralgia Treated by the Decompression Operation Between 1952 and 1954

By

E. Bohm, M. D. and S. Hjöeberg, M. D.

With the introduction by Taarnhøj, in 1952, of intradural decompression of the gasserian ganglion and posterior root of the fifth cranial nerve for trigeminal neuralgia, the surgeon acquired a new method which has occasioned considerable interest. The great advantage of the method is that the trigeminal pain can be abolished without loss of sensation in the face. Two major surgical series have already been reported in which this method has been employed. Taarnhøj (1954) communicated a series of 76 patients who had been treated by this method. Forty-three of them had typical trigeminal neuralgia, and the pain was abolished in thirty-three. Of 27 patients with atypical trigeminal pain, satisfactory result were obtained in 15 cases. The other cases had atypical facial pain, which was abolished only in one case. The observation period varied from 1 to 27 months.

J. G. Love and H. Sven (1954) communicated a series of 100 cases in which the posterior root of the fifth cranial nerve was decompressed via an extradural approach. During the observation period, which varied between 1 and 22 months, 81 patients complained of recurrence, and 58 were relieved of pain. In 11 cases the results could not be reliably evaluated but were described as indeterminate. Most of the recurrences had their onset during the first month after operation.

The decompression method has been employed to a very large extent at this department, since 1952, in the treatment of typical trigeminal neuralgia. The observation period in this series (2 to 4 years) is too short for definitive evaluation of the operative results in a disease such as trigeminal neuralgia, with its spontaneous variations. We have nevertheless sought, even at this early stage, to appraise the method in some degree with the aim of finding out whether it would be justified to revert to the previous surgical methods.

Material and Method

In order to secure an observation period of at least 2 years, the series comprises those cases of typical trigeminal neuralgia that were treated by the decompression method between 1952 and 1954, inclusive. During this
period 115 patients underwent the operation. At the follow-up 4 of them were untraceable and 8 had died, but all of these latter had furnished such detailed particulars of their condition, in the annual correspondence with the hospital, that evaluation of the operative results was possible. The series thus consists of 111 cases. In 28 of these the patients were personally examined by the authors. The others replied to a detailed questionnaire, in addition to which 66 of them were medically examined, in their home districts, with special reference to disturbances of sensation in the face. In 19 cases the operative results were evaluated solely on the basis of the replies to the questionnaire. We classed as recurrences those cases in which attacks of pain, of the same type as before, were experienced after the operation, even if they had been very mild or extremely sporadic.

The age and sex distribution is shown in Table 1.

Table 1. Age and Sex Distribution

<table>
<thead>
<tr>
<th>Age</th>
<th>20--30</th>
<th>31--40</th>
<th>41--50</th>
<th>51--60</th>
<th>61--70</th>
<th>71--80</th>
<th>81--</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>2</td>
<td>12</td>
<td>12</td>
<td>22</td>
<td>9</td>
<td>4</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>12</td>
<td>17</td>
<td>12</td>
<td>1</td>
<td>50</td>
</tr>
</tbody>
</table>

The distribution of the postoperative observation period will be found in Table 2.

Table 2. Postoperative Observation Period

<table>
<thead>
<tr>
<th>Years</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
<td>33</td>
<td>52</td>
<td>26</td>
</tr>
</tbody>
</table>

The operative method was gradually modified. The first 11 patients were treated with the technique reported by Taarnhøj (intradural dissection). In 28 later cases the operation consisted of extradural exposure of the nerve root with division of the tentorial margin and the superior petrosal sinus between silver clips (vide Love and Svien, 1954). Subsequently the decompression was effected, in 72 cases, by blunt dissection of the attachment of the tentorial edge on the pars petrosa without division of the superior petrosal sinus.

Results

Recurrences

Recurrences totalled 43, or 40%. Table 3 shows their distribution in relation to the interval between operation and initial recurrence of pain.

It emerges from Table 3 that the majority of recurrences had their onset within the first 2 years, with the peak during the first year. In three cases