Management of Chronic Pain Post Neurectomy: a role for Dorsal Root Ganglion Stimulation
Line G. Jacques, M.D., M.Sc. and Lizbeth H. Gibson, NP-C, MSN
Department of Neurological Surgery
UCSF, San Francisco, CA

Abstract
Chronic neuropathic pain may be iatrogenic or post traumatic and can be a disabling and crippling in some individuals. Patients may have significant sleep disturbances, experience socio-psychological changes, along with significant physical limitations. A combination of pharmacological treatments along with physical therapy and local infiltrations may be useful. In certain cases, surgical approaches including selective neurectomy can be effective; others will remain chronic and intractable despite all interventional measures. Neurostimulation techniques that can include: spinal cord stimulation, peripheral nerve stimulation and most recently dorsal root ganglion stimulation have shown promising results in the treatment of chronic neuropathic pain.

Method
Pre-operatively, patients were screened for suitability for dorsal root ganglion stimulation after triple neurectomy for groin pain, superficial peroneal nerve neurectomy for ankle and foot pain, saphenous neurectomy for knee pain. Quality of life scores, VAS, and paresthesia mapping were recorded as baseline parameters as well as post operatively. Up to 4 percutaneous leads were placed epidurally at the dorsal root ganglion.

Results
Overall, pain and quality of life measures were reduced by greater than 50%.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age</th>
<th>Gender</th>
<th>F-UP Month</th>
<th>Pain area</th>
<th>VAS</th>
<th>VAS Last F-up</th>
<th>%</th>
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<tbody>
<tr>
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<tr>
<td>JR</td>
<td>62</td>
<td>M</td>
<td>9</td>
<td>Feet</td>
<td>8</td>
<td>3</td>
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<tr>
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<td>M</td>
<td>8</td>
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<tr>
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<td>4F:5M</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>50</td>
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</tr>
</tbody>
</table>

Conclusions
Dorsal root ganglion stimulation is a viable option in the treatment of chronic neuropathic pain and should be considered as part of the pain treatment algorithm when treating this challenging patient population.

References

Intraoperative picture of a neuraoma and histological slides H&E, EMA and trichrome

The Axium™ Neurostimulation System (Dorsal Root Ganglion)

Duration of symptoms: 6.3 years
Adverse Events:
- Migration of lead: 1
- Pain at the site of IPG: 1
Patient satisfaction: 8/9

Intraoperative picture of a neuraoma and histological slides H&E, EMA and trichrome

Conclusions
Dorsal root ganglion stimulation is a viable option in the treatment of chronic neuropathic pain and should be considered as part of the pain treatment algorithm when treating this challenging patient population.

References
One-year outcomes of spinal cord stimulation of the dorsal root ganglion in the treatment of chronic neuropathic pain.