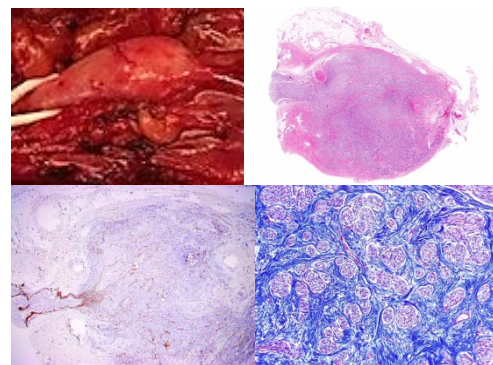




Management of Chronic Pain Post Neurectomy: a role for Dorsal Root Ganglion Stimulation

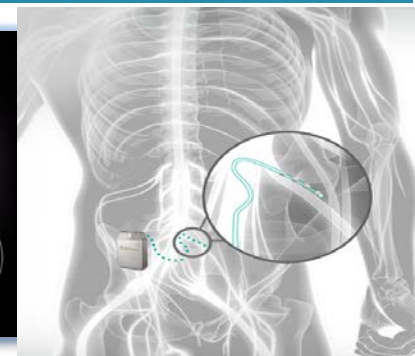
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Intraoperative picture of a neuroma and histological slides H&E,EMA and trichrome

Reactive proliferation of axons, schwann cells and perineural cells
Composed of haphazardly arranged tangles of variably sized regenerating nerve twigs
Positive for axons
Surrounding schwann cells are S-100 +
Nerve twigs are surrounded by EMA and Glut-1+ perineurium



The Axiom™ Neurostimulation System (DorsalRootGanglion)

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%.

Patient N=9	Age Year	Gender	F-UP Mont hs	Pain area	VAS	VAS Last F-up	%
LS	57	F	10	Right abdomen	9	2	78
AA	22	F	9	Right foot	8	6	25
JR	62	M	9	Feet	8	3	63
EW	26	M	8	inguinal	7	4	43
PM	82	M	6	Right knee	7	5	29
JV	49	F	4	Right foot	8	4	50
SB	36	M	4	Left foot	9	6	33
HG	47	F	4	Feet	8	4	50
JB	31	M	3	Right foot	7	3	57
Average	45.8	4F:5M	6		8	4	50

Duration of symptoms: 6.3 years

Adverse Events:

Migration of lead:1

Pain at the site of IPG:1

Patient satisfaction: 8/9

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

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A P and Lateral View