

The Role of Neurectomy in the Treatment of Idiopathic Groin Neuralgia

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Background

- Chronic groin neuropathic pain is one potential complication of surgical intervention in the lower abdomen/pelvic area and may arise from injuries to the iliohypogastric, ilioinguinal, and genitofemoral nerves.
- With approximately 500,000 inguinal hernia repairs, 600,000 hysterectomies, and 500,000 vasectomies performed annually, it is estimated that 2-10% percent develop some degree of chronic post-operative pain^{1,2,3,4}.
- Neuropathic pain has an approximated incidence rate of 2-3% in the developed world, translating to approximately 15 to 20 million individuals over 40 in the US^{5,6}.
- Patients with idiopathic, non-iatrogenic groin neuropathic pain pose a significant diagnostic and treatment challenge, resulting in unnecessary pharmaceutical regimens and unwarranted surgery with overall misappropriation of medical resources⁵.
- Annual average direct and indirect healthcare costs per patient depend on the severity of the neuropathic pain but have been reported as between \$11,846 and \$29,617 respectively⁶.
- Patients also had significantly higher scores on the validated Medical Outcomes Study Sleep Scale (MOSS-SS), indicating worse sleep quality⁶.
- Patients with groin neuropathic pain often experience dramatic decrease in quality of life including but not limited to negative impacts on employment status, emotional/mental health, and average level of daily activity. This makes chronic groin neuropathic pain an often life debilitating condition.

Purpose

- Determine the efficacy of groin neurectomy in assuaging idiopathic chronic groin neuropathic pain, decreasing the usage of pain medications, and improving quality of life (assessed using the validated SF-20 questionnaire).

Methods

- Patients who underwent neurectomy and implantation of the Iliohypogastric, Ilioinguinal, and/or Genitofemoral nerves for idiopathic groin neuropathic pain were identified.
- A retrospective review was performed in which pre- and post-operative data from a chart review, including pain scores (Likert Score), pain medication, demographic information, medical and surgical history, past nerve blocks, physical exam findings, intraoperative details, pathology and imaging results were analyzed.
- A prospective telephone survey was done in which a SF-20 Quality of Life questionnaire was administered. Additionally, patients were asked about their pre/post-operative pain level (Likert score, 0-10), current groin pain level (Likert score, 0-10), and their current use of pain medications.
- A two-sided Wilcoxon Mann Whitney test was used to analyze the data.

Results

- 30 patients were identified. 17 (15 M, 2 F) agreed to participate (mean follow up of 1832 days) while 4 declined. 9 patients were unable to be contacted and 1 patient had passed away.
- 11 patients were classified as having a successful surgery (defined as a 30% reduction in Likert pain score) while 6 patients were classified as having an unsuccessful surgery (success rate of 64.7%).
- Patients with successful surgeries showed a statistically significant increase Social Functioning ($p=.02$) and nearly showed a significant increase in Mental Health on the SF-20 ($p=.057$).

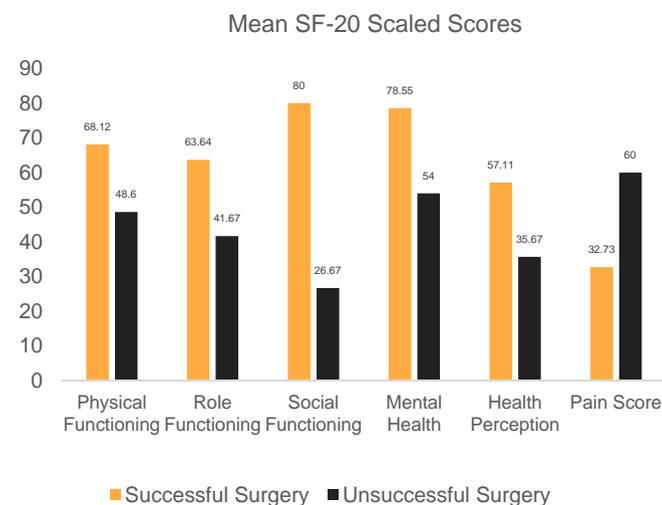


Figure 1: Mean SF-20 Scaled Scores of Successful and Unsuccessful surgeries show a clear trend of improvement in quality of life measures. All measures have an optimal score of 100 except pain, which has an optimal score of 0.

Discussion

- It has previously been shown that the neurectomy of the iliohypogastric, ilioinguinal, and genitofemoral nerves is a viable and effective treatment for iatrogenic post surgical chronic groin neuropathic pain⁷.
- While our success rate of 64.7% is marginally lower than previously published success rates of approximately 75% for iatrogenic chronic groin pain, neurectomy still presents a viable option to patients with idiopathic chronic groin neuropathic pain⁷.
- Additional possible explanations of the decreased success rates are the possibility of misdiagnoses or involvement of additional nerves.
- Our rather unique patient population lends to a smaller sample size which may have led to only significant results in social functioning category in the SF-20 in this study.
- However, it is important to realize the clear pattern of improvements in all measures of quality of life assessed in the SF-20.
- This, in some respects, underscores the ability of neurectomy to alleviate pain and improve quality of life for patients with idiopathic chronic groin neuropathic pain, further validating it as a possible treatment option.

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