Treatment

Intercostal neuralgia due to surgical injury of the intercostal nerve is difficult to treat. No treatment modality has given effective pain relief. Experience with other painful neuromas has demonstrated that neuroma resection and muscle implantation has been effective in the upper and lower extremities. This approach was applied to patients with intercostal neuralgia.

Intercostal neurectomy and implantation of the cut nerve into the latissimus dorsi or into the rib for severe intercostal neuralgia was an efficacious treatment in this small consecutive patient series [1].

Case series

A retrospective review was done of 5 consecutive patients who have had neurectomy of one or more intercostal nerves. Preoperative and postoperative pain levels, patient demographics, length of follow-up, and surgical technique were reviewed.

Average patient age was 51.0 years (range, 39.2 to 61.3). Patients presented an average of 42.8 months (range, 10 to 138) after the surgical procedure or trauma that created their painful intercostal neuromas. The mean maximum pain level was 10, and the mean average pain level was 8 (range, 7 to 9). Postoperatively, the mean maximum pain level was 3.4 (range, 0 to 9), and the mean average pain level was 2.2 (range, 0 to 7). The differences were significant: p less than 0.01 for maximum pain level and p less than 0.05 for average pain level. Average follow-up after surgery was 8.8 months (range, 6.5 to 10.9). The most common surgical technique used was intercostal nerve neurectomy proximal to the intercostal nerve neuroma and implantation of the cut nerve into the latissimus dorsi muscle [2].

Case reports

2017

Iwamuro et al. present a case of multiple thoracolumbar perineural cysts, one of which was considered the cause of intermittent intercostal neuralgia with atypical findings on postmyelographic computed tomography seen as selective filling of contrast medium.

A 61-year-old woman presented with intermittent pain on her left chest wall with distribution of the pain corresponding to the T10 dermatome. Magnetic resonance imaging showed multiple thoracolumbar perineural cysts with the largest located at the left T10 nerve root. On postmyelographic computed tomography immediately after contrast medium injection, the largest cyst and another at left T9 showed selective filling of contrast medium, suggesting that inflow of cerebrospinal fluid to the cyst exceeded outflow. Three hours after the injection, the intensity of the cysts was similar to the intensity of the thecal sac, and by the next day, contrast enhancement was undetectable. The patient was treated with an intercostal nerve block at T10, and the pain subsided. However, after 9 months of observation, the neuralgia recurred, and the nerve block was repeated with good effect. There was no recurrence 22 months after the last nerve block.

They concluded that intermittent elevation of cerebrospinal fluid pressure in the cyst caused the neuralgia because of an imbalance between cerebrospinal fluid inflow and outflow, and repeated

intercostal nerve blocks resolved the neuralgia. Our case demonstrates the mechanism of cyst expansion [3].

[1] , [2]
Williams EH, Williams CG, Rosson GD, Heitmiller RF, Dellon AL. Neurectomy for treatment of intercostal neuralgia. Ann Thorac Surg. 2008 May;85(5):1766-70. doi: 10.1016/j.athoracsur.2007.11.058. PubMed PMID: 18442581.

[3]
Iwamuro H, Yanagawa T, Takamizawa S, Taniguchi M. Atypical findings of perineural cysts on postmyelographic computed tomography: a case report of intermittent intercostal neuralgia caused by thoracic perineural cysts. BMC Med Imaging. 2017 Jun 13;17(1):37. doi: 10.1186/s12880-017-0210-z. PubMed PMID: 28610610; PubMed Central PMCID: PMC5470231.