



## Idiopathic Orchialgia: treatment by sequential cord block

**Bhavinder Arora**

Associate professor, PT BD Sharma PGIMS, Rohtak-124001

### ABSTRACT

**Background:** *Chronic orchialgia is defined as the pain in testis of at least three months duration. This pain be a continuous ache or episodic in nature. In about 1/4 of patients presenting with orchialgia have no obvious cause and are said to be suffering from idiopathic chronic neuralgia. Many treatment options are available from medical therapy to surgical options. Medical therapy produces transient relief only. Most of these patients are young males and refuse for surgery. Trifecta nerve cord block given is a good minimum invasive option and can be performed as office procedure.*

**Material and Methods:** *This prospective study was carried out on 100 patients presenting orchialgia. Causes of inflammation, cyst and tumour were ruled out by clinical examination, laboratory work up and ultrasonography of scrotum. Out of 100 cases studied only 75 were found to be suffering from idiopathic orchialgia. Cord was given using a mixture of Lignocaine and methyl prednisolone at three weeks interval thrice only in a sequential manner.*

**Results:** *The results of sequential cord blocks were very good in 72 patients giving a pain relief period of one year. These patients never reported back with orchialgia.*

**Conclusion:** *Idiopathic chronic orchialgia is common problem but difficult to treat. Medical therapy is of no avail. The minimum invasive technique of trifecta cord block using Lignocaine and Methyl- prednisolone injection in a sequential manner relieves the pain in most of the patients.*

**KEYWORDS :** Chronic orchialgia, testicular neuralgia, cord block, microdenervation

### Introduction:

Orchialgia is chronic pain occurring in the in the testis. It is a chronic pain occurring for many days to months. Orchialgia is said to be chronic if it is persisting for more than three months.<sup>1</sup> The pain in orchialgia may be a persistent dull ache or may episodic during strenuous exercise like cycling, long standing and driving. Chronic orchialgia can be due idiopathic, infection and inflammation.<sup>2</sup> The secondary causes of orchialgia are epididymitis, spermatocele, varicocele, tumor and adjacent paratesticular structures. An investigation work up is necessary to rule out the pathological condition responsible for testicular pain. Once these pathological conditions are ruled out, the orchialgia is labelled as idiopathic chronic orchialgia.<sup>3</sup> The idiopathic chronic orchialgia occurs in young males in 20-30 years of age group. The pain can be unilateral or bilateral. There are no clinical findings in most of patient except occasional tenderness. The treatment of idiopathic orchialgia is difficult as no guidelines are available for treatment.<sup>4</sup> Oral antibiotics and anti-inflammatory treatment produces a transient response. Most of the patients have to be advised a unique treatment option that provides relief to the patient. The goal of treatment advised to a patient with idiopathic orchialgia is to return to routine daily activities without use of anti inflammatory drugs.

A multi prong approach is a good option. These patients can be treated with medical therapy and cord nerve block can be given in sequential manner. Microdenervation or neurolysis is the surgical procedure for a small group of patients who cannot be cured with multiple nerve blocks. Some patients are not curable and my require referral to pain clinic.<sup>5</sup> This study was planned with aim to treat the patients with idiopathic chronic orchialgia with sequential trifecta cord block, thus avoiding need of surgery.

### Material and methods:

This prospective study was carried out on 100 patients presenting with complain of pain the testis. The history and clinical examination was done.

### Inclusion criteria:

Those patients having normal or near normal size testis and some tenderness were included in the study.

### Exclusion criteria:

The patients having any inflammatory pathology like epididymitis,

epididymo-orchitis, hydrocele, epididymal cyst, spermatocele and testicular tumour were excluded from this study.

All the patients had laboratory work up consisting of haematological investigations like Hb, TLC/DLC, Blood Urea, Blood Glucose level and complete urine examination. Ultrasonography of scrotum was done in all the patients. These investigations helped in identifying patients suffering from secondary orchialgia from paratesticular causes. Those patients in which no cause of pain was identified on clinical examination, laboratory work up and ultrasonography were excluded from the purview of this study. Urinary tract infection and prostatitis were causes for which patients with normal looking testis were excluded from this study. On these criteria 25 patients were excluded from the study. Only 75 patients were subjected to this cord block study.

### Technique:

Cord block is given using a mixture of 5ml of 2% Lignocaine and 1ml of methylprednisolone containing 40mg/ml. The cord block is given twice more at 3 weeks interval. In total three injections into the cord are made using this mixture of local anaesthetic and methylprednisolone.

### Results:

Out of 100 patients included in this study considering them suffering from orchialgia, 25 patients were excluded from the study on basis of laboratory work up.

The follow up was done on weekly basis. The period of pain relief is noted and is depicted in table 1.

**Table 1**

CORD BLOCK	Duration of pain relief	No. Of Patients
First	2 weeks	52
Second	3 weeks	60
Third	50 weeks	72

Results of sequential cord blocks were very good in 72 patients giving a pain relief period of one year. These patients never reported back with orchialgia.

**Discussion:**

The nerve supply of the testis and other structures in the scrotum is from the ilioinguinal, iliohypogastric and genitofemoral nerves. The afferent nerve fibres from testis and other scrotal structures is carried out in these three somatic nerves.<sup>6</sup> Besides this autonomic branches from parasympathetic ganglia of T 10-12 supply the testis, epididymis and vas deferens.<sup>7</sup>

Most authors agree that orchidectomy is the treatment of last resort and therapy should be based on physiological as well as anatomic principles.<sup>8</sup> A precise injection of local anaesthetic into the spermatic cord is done producing trifecta nerve block. If this resolves pain, the orchialgia is thought to be of neurogenic origin. The neurogenic origin is thought to be due to hypersensitive nerve fibres<sup>9</sup>. This cord block can provide pain relief for a few hours to days. As the patient gets relief of pain, spermatic cord block has been tried using a mixture of 1% Lignocaine 5ml with 1ml of methylprednisolone (40mg/ml). The procedure if successful can be repeated at regular interval for long term pain relief. The anti inflammatory action of methyl prednisolone produces long term pain relief.<sup>10</sup>

A patient who gets transient pain relief only by Lignocaine block or does not responds completely to repeated cord blocks is considered as a good candidate for denervation of the spermatic cord.<sup>11,12</sup> Robotic targeted neurolysis is another option for permanent pain relief.<sup>13</sup> the nerve distribution is quite complex in the spermatic cord and cord block may miss some critical nerves; so cord block may produce transient or no response. This may explain why some patients do not respond to the block but are relieved of pain by targeted denervation or neurolysis. If the patient does not want surgery, a series of three cord blocks may be tried at monthly interval. Most of patient can get pain relief permanently but some have relapse of pain after one year even after sequential nerve blocks.

Because medical treatment has lower success rate, we proceeded directly to the cord block using Lignocaine and Methyl prednisolone. In our study, all the patients got pain relief after sequential cord block. 50% got relief after one injection, 25% after two injections and rest 25% after three injections.

**Conclusion:**

Idiopathic chronic orchialgia is frequent problem but difficult to treat as the cause is unknown. With use of medical treatment is difficult to treat and is known to reoccur. The minimum invasive technique of trifecta cord block using Lignocaine and Methyl- prednisolone injection in a sequential manner relieves the pain in all the patients. Recurrence of orchialgia occurs in a small number of patients after one year. The sequential cord block can be repeated. This can avoid the surgical procedures like microdenervation of the cord.

**References:**

1. Davis BE, Nobel MJ, Weigel JW, Foret JD, Mebust WK. Analysis and management of chronic testicular pain. *J Urol* 1990;143:936-9.
2. Brown FR. Testicular pain, its significance and localization. *Lancet* 1994;1:994-5.
3. Granisiotis P, Kirk D. Chronic testicular pain: An overview. *Eur Urol* 2004;45:430-6.
4. Levine L. Chronic Orchalgia: evaluation and discussion of treatment options. *Ther Adv Urol* 2010;2(5-6):209-14.
5. Hori S, Sengupta A, Shukla CJ, Ingall E, McLoughlin J. Long term outcome of epididymectomy for the management of chronic epididymal pain. *J Urol* 2009;182:1407-12.
6. Masarani M, Cox R. The aetiology, pathophysiology and management of chronic orchalgia. *BJU Int* 2003;91:435-437.
7. Peterson DF, Brown AM. Functional afferent innervations of testis. *J Urol* 1973;36:425-33.
8. Parekattil SJ, Priola KB, Atalah HN, Cohen MS, Allan RW. Trifecta of pain: anatomic basis for denervation of the spermatic cord for chronic orchialgia. *J Urol* 2010;183(Suppl):e730-e731.
9. Costabile RA, Hahn M, McLeod DG. Chronic orchialgia in the pain prone patients: the clinical perspective. *J Urol* 1991;146:1571-4.
10. Singh V, Sinha RJ. Idiopathic chronic orchialgia-a frustrating issue for the clinician and patient. *Indian J Surg* 2008;70:107-10.
11. Levine LA and Matkov TG. Microsurgical denervation of the spermatic cord as primary surgical therapy for the treatment of chronic orchialgia. *J Urol* 2001;165:1927-30.
12. Heidenreich A, Olbert P, Engelmann UH. Management of chronic testalgia by microsurgical testicular denervation. *European Urol* 2002;41:392-7.
13. Parekattil SJ, Cohen MS. Robotic surgery in male infertility and chronic orchalgia. *Curr Opin Urol* 2010;75-9.