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ABSTRACT

Purpose: We investigated Patients presenting with chronic orchialgia at Andrology in institute of kidney and diseases Peshawar, from 2003 August up to when were included.

Materials and Methods: A thorough history and physical examination was undertaken including description of pain by the patient in terms of site, severity, radiation and associated pain. Extensive workup, directed by history and phsical examination, was done to rule out reversible causes of orchalgia. All patients had urinalysis, culture and ultrasound scrotum with color Doppler. Further investigations like semen analysis, culture and hormonal workup were done if indicated. The intensity of the pain was noted according to visual analogue scale. Patients were subdivided into three groups as mild pain (group A, pain score=1 - 3), moderate pain (group B, pain score=4 - 6) and severe pain, (group C, pain score=7 - 10). Site of pain and radiation/association to any other region was recorded.

Finding: Results of the study indicated that 92 patients reported at institute of kidney diseases Peshawar with chronic orchialgia had their mean age at 37+/-4years. Five patients lost to follow so 92 were included in final analysis (table 01). Pain was partially relieved in 14 patients and not relieved in another 9 patients which is almost 76% of total patients. These non-responders were compared with the remaining in which pain was completely relieved. There was no difference in etiology among responders and non-responders, however pain severity was more in non-responders at initial presentation (table 2).

Conclusions: Patients with pelvic floor muscle spasm are more likely to experience treatment failure following microscopic subinguinal spermatic cord denervation for chronic scrotal content pain, even with a favorable response to spermatic cord block. A history relating to pelvic floor muscle spasm should be taken for all patients presenting with chronic orchialgia or chronic scrotal content pain, and digital rectal exam should be performed if the history is suggestive. If underlying pelvic floor dysfunction exists, pelvic floor physical therapy can be offered to patients prior to spermatic cord denervation. History of prior vasectomy, epididymectomy, prior inguinal or scrotal surgery or other patient demographic factors were not associated with treatment failure.

Keyword: *Chronic orchialgia, spermatic cord block, vericocelectomy, subinguinal*

INTRODUCTION

Chronic orchialgia is defined as " intermittent or constant, unilateral or bilateral testicular pain, 3 months or longer in duration that significant significantly interferes with the daily activities of the patient so as to prompt him to medical intervene intervention"[1]It has been suggested that in so-called chronic orchalgia, Pam may not be limited to tech nididymis.[2-4] vas deferens, or adjacent Para testicular structures may also be painful Therefore such pain may be more on scrotal content pain 21 The pathogenesis of this condition is poorly understood and the effect of underlying conditions e.g. varicocele and underlying conditions e.g. varicocele and post vasectomy sperm granuloma is unpredictable. Chronic orchalgia is agonizing.[4-6] Chronic orchalgia is agonizing and stressful for the patients and has significant impact on their quality of life in severe cases patients the touch of routine dress garments. Treatment of these patients is largely empirical. First line tar patients is largely empirical. First line treatment usually consist of analgesics combined with pain modulators like tricycle antidepressants and modulators like tricycle antidepressants and Gabapentin [6-9]. Spermatic cord block are used both for therapeutic relief of pain a pot for therapeutic relief of pain and to assess response and decide for microsurgical enervation[10].

There is no consensus on when to proceed for surgical therapy Surgical management is usually reserved for the patients in whom medical treatment is not effective or when an underlying disease is identified which is amenable to surgical intervention.[11-14] Surgical options include epididymectomy and vasectomy reversal in patients w post vasectomy pain; and Microsurgical enervation of spermatic cord (MDS) [15-16] In patients with chronic orchialgia and varicocele,[17-18] microsurgical varicocelectomy is usually offered, but complete response rates vary from 53 to 91% [9, 10). Owing to uncommon presentation and lack of standard protocols,[19-20] treatment of chronic orchalgia is largely empirical based upon personal experiences and available resources. We present short term results of patients presenting with chronic orchalgia in our andrology clinic,[21] managed using a standardized protocol. We also suggest an algorithm based upon our results.

METHODS

Conservative treatment options are presented and then targeted surgical interventions that the urologist may perform are then presented in a structured algorithm format. Many of these patients may obtain a significant reduction in pain with some of these treatments. Patients presenting with chronic orchialgia at Andrology in institute of kidney and diseases Peshawar, from 2003 August up to when were included. A thorough history and physical examination was undertaken including description of pain by the patient in terms of site, severity, radiation and associated pain. Extensive workup, directed by history and phsical examination, was done to rule out reversible causes of orchalgia. All patients had urinalysis, culture and ultrasound scrotum with color Doppler. Further investigations like semen analysis, culture and hormonal workup were done if indicated. The intensity of the pain was noted according to visual analogue scale. Patients were subdivided into three groups as mild pain (group A, pain score=1 - 3), moderate pain (group B, pain score=4 - 6) and severe pain, (group C, pain score=7 - 10). Site of pain and radiation/association to any other region was recorded. Patients were managed for chronic orchialgia according to a standardized protocol and prospectively followed for pain resolution categorized as complete relief, partial relief and no relief.

Management protocol for orchalgia: Patients were initially managed by oral analgesics with or without antiinflammtory medicines. Antibiotics were prescribed where indicated. Non-responders were offered spermatic cord block. A combination of Bupivicaine 3 ml + Triamcinolone 10 mg was used for injections. If tender points other than scrotum identified during examination, high ilio-inguinal nerve block or paravertebral block for tender points were administered. Microsurgical varicocelectomy was offered to patients who had varicocele on clinical examination and had more than 2.5 mm diameter varicocele veins on color Doppler ultrasonography. Microsurgical denervation of spermatic cord was offered if pain was not responding to oral medications but temporarily relieved with spermatic cord block as suggested by Benson (5). Microsurgical denervation was also offered to patients undergoing microsurgical varicocelectomy if they responded to spermatic cord block. All surgical procedures were carried out by a single Fellowship trained surgeon using standard technique. Patients were referred to pain clinic for further management if pain was not relieved at all.

Table 01: Patients Demographics

DEMOGRAPHICS	VALUE
No.patients	92
No. surgeries included	114
Mean age (years, SD, range)	37+4(13.2:20-88)
Right	22(22%)
Lacterality – (%)	
Prior vasectomy, n (%)	32(%)
Prior epididymectomy, n (%)	9(8.8%)
Other prior inguinal/scrotal surgery, n	50(49%)
Pelvic floor muscle spasm, n(%)	19 (19%)
Median time with orchialgia (months, Q1-Q3)	24(12-60)
Mean BMI (Kg/m^2 ,SD, range	29.4(6.0:18.1-47.1)
Resolution of pain, n (%)	92 (76%)

Table 02: Predictors of MSCD Failure

No of patients 92	Odds ratio	95% CI	P value
Age (per year)	0.98	0.95-1.02	036
BM1 (per kem2)	0.96	0.91-1.06	0.70
Months of Pain (per month)	1.00	0.99-1.00	0.48
Side (ft vs. L)	1.18	0.46-3.00	0.74
Prior vasectomy	1.45	0.47-4.50	0.52
Prior epididymectomy	0.60	0.09-3.90	0.60
Other prior inguinalserotal surgery	0.99	038-2.66	0.99
Presence of pelvic floor muscle spasm	3.95	1.27-1226	0.02

RESULTS

From August 2003 to April 2011, 92 patients reported at institute of kidney diseases Peshawar with chronic orchialgia. Their mean age was 37+/-4years. Five patients lost to follow so 92 were included in final analysis (table 1). Pain was partially relieved in 14 patients and not relieved in another 9 patients which is almost 76% of total patients. These non-responders were compared with the remaining in which pain was completely relieved. There was no difference in etiology among responders and non-responders, however pain severity was more in non-responders at initial presentation (table 2). Reaming patients were found to have additional pain sites (APS) besides inguinoscrotal region. These APS included ipsilateral or contralateral thighs; iliac, supraumblical and lumbo-sacral regions. Relevant radiological investigations for these additional pain sites and scrotal color Doppler ultrasound were found un-remarkable. Pain in these APS occurred in ipsilateral or sometimes contralateral testis and did occur occasionally independent of scrotal pain in 5 patients. Oral analgesics provided no relieve in pain, however spermatic cord block not only relieved their scrotal pain, but also provided a durable relief to these APS at 6month follow-up.

DISCUSSION

There is a great variability in the management of chronic Orchialgia. Various medical as well as surgical options have been described. This variability stems from our incomplete understanding of pathophysiology this uncommon condition. Various new treatment options like Electro puncture in combination with amitryptaline, multiphoton microscopy and ablation of selective nerves, pulsed radio frequency denervation of spermatic cord etc. have been proposed for management of chronic orchialgia. The complexity of this disorder demands a methodical management plan and resources which are usually only available at dedicated centers. We suggest a management algorithm which takes into account the underlying etiology and response to spermatic cord block as suggested by Benson (5). Microsurgical denervation (MSD) should be offered if the patient has

responded to spermatic cord block. This MSD can be combined with microscopic varicocelectomy if the patient also has clinical varicocele (Figure 1) Varicocele is commonly linked with chronic orchialgia and its treatment relieves pain in most, but not all of the patients.

Also many patients with varicocele do not have chronic orchalgia and vice versa suggesting other factors may have a role in pathogenesis. In our study regardless of etiology the response to treatment was not different in varicocele as well as in non-varicocele patients. This suggests that our methodical approach to chronic orchalgia remains valid irrespective of underlying etiology and can help physicians in making a decision. Levine has suggested that this pain should be named as chronic spermatic cord content pain due to its potential to radiate. In our experience the pain radiates even farther than the scrotal contents to as far as ipsilateral or contralateral, thigh, inguinal and suprapubic region. Interestingly it was found that this referred pain gets relieved by spermatic cord block which suggests that it is linked with spermatic cord contents. Further studies and investigations (nerve conduction studies or EEG) is required to understand the exact mechanism of this un-explored phenomenon.

CONCLUSION

Our Finding that 92 patients reported at institute of kidney diseases Peshawar with chronic orchialgia. Their mean age was 37+/-4years. Five patients lost to follow so 92 were included in final analysis (table 01). Pain was partially relieved in 14 patients and not relieved in another 9 patients.its almost **76%** of total patients. These non-responders were compared with the remaining in which pain was completely relieved. There was no difference in etiology among responders and non-responders, however pain severity was more in non-responders at initial presentation (table 2).

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