

IMPROVEMENT OF SYMPTOMS OF CHRONIC PROSTATITIS LIKE PERINEAL HEAVINESS AND FREQUENCY AFTER TEN COMPLETE SESSION OF PER RECTAL INFRA RED LASER THERAPY

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Abstract :

Objective : *To observe the improvement of the symptoms of perineal heaviness and frequency after treatment with Magnetic Infra Red Laser therapy in patients of chronic pelvic pain syndrome /Chronic Prostatitis.*

Methods : *This study was an observational study done on 30 male patients with age range varied from 30 to 60 years .The study was conducted from 2009 to 2011 in a private medical center at Dhaka city . The MIL-therapy in use has a wave length of 904 nm and a frequency of 3000 Hz. The Laser beam reaches the prostate with a special optical probe. In this study the patient is examined per rectally after doing digital rectal examination with use of gloves and gel. At the beginning we used a “Laser Super Sonic” machine with endorectal optical probe according to Strada. The treatment schedule was one treatment every two days (treatment’s time of 5/10 minutes, wave length 1000 KHz) for a total of 10 applications. After 10 applications patients were asked for follow up and data were collected and analysed.*

Results : *Out of 30 patients of chronic pelvic pain syndrome aged between 30-60 yrs were under treatment with MIL therapy. Among them only 22 patients were with complains of perineal heaviness, 20 patients were cured and 22 patients were with complains of frequency, 20 were cured and 02 were improved after laser treatment . Among 30 cases 23 patients found normal sized prostate and 07 found enlarged prostate on digital rectal examination and on USG findings, 21 were found normal sized , 09 found enlarged sized prostate and 07 patients had increased PVR .*

Conclusion : *Treatment with Magnetic infra red laser therapy (MIL-therapy) gives useful effect on chronic pelvic pain syndrome (CPPS). The following short article gives a very good summary of the benefits of laser therapy and totally cured of symptoms . CPPS , a painful type of Chronic Prostatitis frequently troubles man for years. Among many sign and symptoms of CPPS , like perineal heaviness and frequency were observed and found very good effect after laser therapy.*

Key words : *MIL Therapy ,Chronic pelvic pain syndrome (CPPS), Perineal heaviness, Frequency.*

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Introduction :

Chronic prostatitis or chronic pelvic pain syndrome (CP/ CPPS) occurs in men and is characterized by persistent discomfort or pain in the pelvic area that lasts several months, often longer. The discomfort is usually at the base of the penis and around the anus and lower back. Sometimes it spreads into the testes. Some patients have perineal heaviness, and others may have pain or a frequency or urgency when they pass urine, as well as a poor urinary stream[1]. Laser means Light Amplification by Stimulated Emission of Radiation and was first theorized by Einstein. This was a tube laser with a metal chamber, which contained the element ruby[2,3]. MIL therapy is based on a combinative mutually reinforcing influence of impulse infrared laser irradiation, pulsating red light, pulsating wide-band infrared irradiation and static magnetic field on a biological object. Laser is a technical device, which emits in the form of a focused directive beam a coherent monochromatic polarized electromagnetic irradiation, i.e. the light in a very narrow spectral region. The cause of CP/ CPPS is not known[3]. Prostatitis is a disease entity that is diagnosed by symptoms, microscopy of expressed prostatic secretions (EPS) and culture of EPS and segmented urine samples. It is a common medical condition [4,5,6].

There are two main types of chronic prostatitis. 'Chronic bacterial prostatitis' is caused by persistent (chronic) infection with a germ (a bacterial infection). 'Chronic prostatitis/chronic pelvic pain syndrome (CPPS)' has a cause which is not fully understood[7]. Chronic prostatitis typically causes pain in the lower pelvic region of men. Urinary symptoms such as frequency of passing urine and pain on passing urine may also be present. Treatment can be difficult and may include antibiotics and other medicines. Symptoms may last a long time, although they may 'come and go' or vary in severity[8].

Chronic prostatitis/CPPS is a persistent (chronic) discomfort or pain that you feel in your lower pelvic region - mainly at the base of your penis and around your anus. It is usually diagnosed if you have had pain for at least three months within the previous six months. The cause of this type of chronic prostatitis is not fully understood. Many theories have been put forward as to the cause. These include:

- Infection of the prostate with a germ that has not yet been identified.
- Nerve problems affecting the prostate.
- An autoimmune problem of the prostate gland (antibodies that we normally produce to fight infection

may be attacking the cells of the prostate gland for some reason).

Inflammation resulting from urine being forced backwards up into the prostate at the time of urination[8,9].

Magnetic infra red laser has analgesic effect due to changes in the potential of nerve cell membranes lead to its hyperpolarization as a good analgesic mechanism. It improves release reaction of endorphins and changes in transmitter concentration at the synapses[9,10,11].

MIL also has inflammatory effect due to proliferation of immune cells (enhancement of immune response, increase of NK cell activity etc.), enhances lymphatic activity (drainage). It improves microcirculation (vasodilation) and reduces swelling (oedema & haematoma resorption)[9,10,11].

Materials and methods:

This study was an observational study done on 30 male patients with pelvic pain and age range varied from 30 to 60 years. The study period was from 2009 to 2011 in a private medical center at Dhaka city. The MIL-therapy in use has a wave length of 904 nm and a frequency of 3000 Hz. The Laser beam reaches the prostate with a special optic probe. In this study the patient is examined per rectally after doing digital rectal examination with use of gloves and gel. It can be sterilized and it is atoxic. At the beginning we used a "Laser Super Sonic" machine with endorectal probe according to Strada. The treatment schedule was one treatment every two days (treatment's time of 5/10 minutes, wave length 1000 KHz) for a total of 10 applications. Transrectal laser therapy was not indicated in prostate larger than 4 cm because this is the maximum depth of the laser beam's efficacy.

Results:

Out of 30 cases studied, age of the patients was between 30 to 60 years. Among the symptoms of the patients, dysuria was observed after applying MIL therapy.

Table-I shows age distribution of the patients.

Table- I
Distribution of patients by age(n=30)

Age of the patients (yrs)	Number of patients (n)	Percentage (%)
31-40	13	43
41-50	8	27
51-60	9	30

Table-II
Distribution of patients by symptoms (n=30)

Symptoms	Number of patients	Percentage%
Perineal Heaviness	22	73
Frequency	22	73

Among 30 patients 22 patients had Perineal Heaviness and 22 had frequency.

Table-III:
Digital rectal examination (DRE) finding of the study cases(n=30)

DRE finding	Number of patients	Percentage
Enlarged prostate	7	23
Normal sized prostate	23	77
Any other finding	0	0

After DRE, among 30, 23 patients found normal sized prostate and only 07 patients found enlarged prostate.

Table-IV
Ultrasonogram (USG) finding of the patients(n)

USG finding	Number of patients	Percentage
Increased PVR	7	23
Enlarged prostate	9	30
Normal sized prostate	21	70
Any other	0	0

Table IV showing USG findings and found 21 patients had normal sized prostate and only 09 patients had enlarged prostate . 07 patients found increased PVR

Table-V
Improvement of Perineal Heaviness and frequency after laser treatment

Symptoms	Cured	Improved	Not improved
Perineal Heaviness	20	02	0
Frequency	22	0	0

After per rectal laser therapy by optical probe there were improvement of symptoms found . Patients with Perineal Heaviness , about 20 were cured , 02 were improved and Patients with Frequency all (22) were cured.

Table-VI
Complications after laser treatment (n=30)

Significant complication	Number of patients	Percentage
Yes	0	0
No	30	0

There were no significant complication found after per rectal laser treatment.

Discussion:

Chronic pelvic pain syndrome (CPPS), is used to designate unexplained chronic pelvic pain in men. This pain is associated with irritative voiding symptoms and/or heaviness in the perineum , groin etc. Current research has provided evidence of numerous symptoms considerations, including frequency and perineal heaviness. Chronic prostatitis/Chronic pelvic pain syndrome (CPPS) is a very uncomfortable condition affecting males from very young age to above 70s. The exact clean cut diagnosis is very difficult. Many patients of such condition end up with unnecessary protatectomies and bladder neck incisions(BNI), having no effective recovery. This made the scientists and urologists desire to find out ways of recovery from this benign but devastating situation.

Magnetic Infra Red Laser therapy(MIL-therapy) is a possible answer to alleviate this problem. This technique has not gained much popularity in our country as yet. Awareness of its effect having minor or no complication and further study are needed to gain its acceptance by clinicians.

Many investigators studied considering the symptomatology, perineal heaviness and frequency are the most common presentation which were present in 100%of the case studied. This correlates exactly with other different studies[9,10,11]. Regarding frequency and perineal heaviness, are exactly similar to certain other studies[12,13,14].

Several studies showed that the symptoms perineal heaviness and frequency commonly cured by MIL therapy and some patients improved their symptoms after MIL therapy[11,12,5,16]. Digital rectal examination (DRE) is necessary mainly to exclude LUTS due to prostatic enlargement- benign or malignant¹⁴. Prostate size was normal in 77% cases and mild enlargement in 23% cases.

Post void residual volume(PVR) and prostate size were found to be normal in most of the cases in this series. Literature also illustrates the same findings[10,11].

After completion of laser therapy, patients were assessed for their improvement and they were followed up for a period of six months. Improvement of symptoms were graded on a subjective scale of cured, improved and not improved. As the scoring is subjective, there is an element of fallacy. It was found that, there was hardly any patient who did not improve. Majority were cured and rest had improvement with only one patient having no improvement of any symptom. Studies in Europe and America describes around 100% recovery after laser therapy[14,15,16]. Similar studies showed totally cured the symptoms of Chronic prostatitis after laser therapy in Bangladesh[17,18].

Conclusion:

Magnetic infra red laser therapy is a very common and beneficial treatment of the patients of Chronic pelvic pain syndrome (CPPS). Laser Therapy is a safe and effective form of therapy.

This article produce a very good summary of the fruitful effect of laser therapy .The condition is poorly understood and difficult to treat.Among many sign and symptoms of CPPS, Perineal heaviness and frequency were observed and found very good effect after laser therapy. In this study it was proved that improvement and cure of perineal heaviness and frequency occur after applying MIL therapy .

Conflict of Interest : None Declared

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Abbreviations:

- CPPS : Chronic Pelvic Pain Syndrome
 EPS : Expressed Prostatic Secretion
 MIL : Magnetic Infrared Laser