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Dermatology

Evaluation of Intralesional Injection of Platelet Rich Plasma Compared with Mitomycin-C plus Dexamesathone in Treatment of Peyronie's Disease

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ABSTRACT

Background: Peyronies disease (PD) is a physically and psychologically debilitating illness marked by a fibrous inelastic tunica albuginea scar that results in a visible penile scar and deformity.
Aim of the study: To assess the efficacy of intralesional injection of platelet rich plasma to Mitomycin-C with Dexamethasone in the treatment of Peyronie's Disease, researchers conducted a study.
Patients and Methods: This study was Prospective interventional randomized comparative trial carried out on adult's male Patients with Peyronie's disease who visited the Andrology outpatient clinic, Kasr El Aini Hospital, and Cairo University .
Only 50 patients with Peyronie's disease were included in the first screening of 75 patients who complained of PD. The study enrolled those who met the inclusion criteria.
Results: There was a statistically significant improvement in PDQ domains, and IIEF scores after treatment with no superiority of neither option. Additionally, degree of curvature and erectile dysfunction improved in both groups after treatment as well; but to a different extent.
Conclusion: Intralesional injection of PRP and Mitomycin-C plus Dexamethasone could improve Peyronie's Disease symptoms. Mitomycin-C plus Dexamethasone more effective than PRP Penile curvature and plaque size improvement, while PRP was more effective in improvement of erectile function.

Keywords: *Peyronie's Disease; Platelet rich plasma; Mitomycin-C.*

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INTRODUCTION

Peyronie's disease is characterized by a fibrous, inelastic lesion of the tunica albuginea (PD). Globally, 3–9% of males are thought to be affected, with the number likely to be higher in high-risk groups such as diabetics. 1 The disorder can cause pain, erectile dysfunction, and penile abnormalities, including shortening. In addition to sexual function, the condition has significant negative consequences for quality of life, self-esteem, and psychological well-being.2 Despite the fact that Parkinson's disease has been recognized for over 250 years, little progress has been achieved in understanding the disease's actual genesis and pathology. The most widely recognized theory is that proposed by Devine et al. 3 in 1997, which involves intercourse-related recurrent trauma to the erect penis. This is in line with the notion that repetitive rigorous muscle loading can result in micro-injury and repair, as well as fibrosis, calcification, and other complications. 4

The disease is separated into two phases: active and chronic.

Active plaque production, Progressive penile deformity (curvature and indentation/narrowing) and length decrease, with or without erections characterize the active or acute phase lasts for up to 18 months. The chronic phase, on the other hand, is marked by deformity stabilization and pain improvement or remission in the majority of cases, and is defined as symptom stability and lack of advancement for at least three months. [6] A non-surgical therapeutic option is to inject medicines into the plaque. Localized delivery and greater medication concentrations inside the plaque result from injecting pharmacologically active substances directly into the penile plaque. Intralesional steroids have long been used to combat the inflammatory environment that causes peyronies plaque growth by inhibiting phospholipase A2, suppressing the

immunological response, and lowering collagen formation.[7] Mitomycin-C is an alkylating antineoplastic antibiotic derived from Streptomyces sp. specially S. caespitosus. It acts by crosslinking DNA between adenine and guanine, thereby inhibiting DNA synthesis. It also suppresses cellular RNA and protein synthesis and is not cell cycle specific. Therefore, it is useful in delaying the healing process by prohibiting the replication of fibroblasts and epithelial cells and inhibiting collagen synthesis.[8] The present goal of this study was to evaluate the efficacy of intralesional injection of platelet rich plasma compared with Mitomycin-C plus Dexamesathone in treatment of Peyronie's Disease. This study aimed to improve management of Peyronie's disease.

PATIENTS AND METHODS

This was a prospective interventional randomised comparative trial conducted on adult male patients attending the Kasr El Aini Hospital's outpatient clinic for andrology. complaining of Peyronie's disease. An initial screening was done on 75 patients complained of PD, only 50 patients with Peyronie's disease who met the inclusion criteria were enrolled in the study.

Inclusion criteria: Adult males > 21 years with acute inflammatory phase of the disease A soft nodule or plaque, painful erection, and/or a recent change in penile curvature are all linked to a soft nodule or plaque, painful erection, and/or a recent change in penile curvature. Patients with PD in the chronic or fibrotic stage, previous medical, surgical, or extracorporeal shock wave therapy (ESWT) treatment for PD, calcified plaques or hourglass deformity as defined by duplex Doppler ultrasonography, severe concomitant Erectile Dysfunction (IIEF score 7), subjects with platelets or blood clotting and any medical treatment for ED before or during the study, severe penile curvature incompatibility were all excluded. An informed consent was taken from each potentially eligible man presented with PD.

All patients were subjected to:-

History taking: Personal history: Including: age, marital status, occupation, residence and any special habits of medical importance. Medical history: Including general diseases e.g. diabetes mellitus, hypertension, also history of drug intake, history of any surgical operations and history of any accidents or genital trauma. Any history of psychiatric problem was also noted together with any medical treatment taken by the patient. History of Dupuytren's contracture was also asked for. Sexual history: Including presence of normal erectile rigidity, occurrence of sleep-associated erections, if easy intromission and if there is to any partner, a painful erection or painful intercourse. In addition, the patient was questioned about his desire towards sex and his wife, orgasm and ejaculatory problems.

Physical examination: General examination: Blood pressure, peripheral pulses, general body built of the patient, signs of androgenization and preservation of genital reflexes and sensations were observed. Genital examination: Penile examination: the penis was examined for soreness and plaques, as well as the size and location of the urethral meatus. Scrotal examination: the testis, epididymis and spermatic cords were examined for exclusion of any abnormality.

International Index of Erectile Dysfunction: Through structured interviews with the patients, we employed in this study the Arabic version of the shortened 5-item version of the International Index of Erectile Function (IIEF-5) scoring system. [9]

The doctor asked the questions; therefore it was an interview questionnaire.

Peyronie's disease questionnaire (PDQ): The PDQ was given to all patients who had vaginal intercourse in the previous three months as well as the IIEF at the start of the study; those who did not meet the vaginal intercourse criteria were not asked to fill out the PDQ. The PDQ is a 15-question questionnaire that has been validated to measure the clinical and psychosexual consequences of PD. In the current analysis, only patients who reported pain at baseline (penile pain score 4 at baseline) were included in the PDQ penile pain analyses (adjusted total score range 4-30) to examine clinical associations between change in PDQ penile pain and clinical outcomes of interest. This was an interview questionnaire as the questions were asked by the doctor.

Test for intracorporeal injection: Done before therapy and 3 months after initiation of therapy. Sterile technique was done to reduce the risk of infection. Intracavernosal injection using 1cc of Prostaglandin E1 (PGE1) was performed. Observation of the erectile status after 10-15 minutes and the penis was examined for the degree, duration, and degree of penile rigidity, as well as the direction and degree of penile deviation.

Penile Duplex evaluation: Gray-scale or B-mode US was used to evaluate the penile anatomy, underlying plaque location, size and presence of calcification.

Laboratory preparation: (to assess risk factors for ED): After a 12-hour overnight fast, all patients were examined between 8 and 10 a.m. Total cholesterol, triglycerides, high-density lipoprotein cholesterol (HDL), low-density lipoprotein cholesterol (LDL), total testosterone, and HbA1c were all measured in venous blood. **Treatment: 40 patients** with PD were given the following treatment: A newly produced combination of 1ml dexamethasone (8mg/2ml) 1ml mitomycin (0.2mg) was injected into 20 patients in Group A using a 3 ml syringe and a 25G/26G needle at the periphery as well as in the plaque (GA). Patients received three injections at one monthly interval. Group B (GB): included 20 patients received PRP injection, 1 injection every 2 weeks for a period of 2 months in the plaque ensuring uniformity of the injected drug. **PRP preparation method:** Using the PRP Kits (MM MEDIC TUBES FOR PRP-THERAPY, Ukraine), ten milliliter of blood was collected into tubes containing acid citrate dextrose (ACD) and centrifuged at 500 G for 5 minutes . Upper 2/3rd plasma was collected as

platelet-poor plasma, and the bottom pellet will be resuspended in the residual lower 1/3rd plasma and used as PRP.

Main outcomes measures: The major effectiveness outcome was the change in penile curvature from baseline to endpoint (12 weeks after therapy) (degree). The change in plaque size (mm), the IIEF-5 score, and the PDQ were the secondary outcomes.

STATISTICAL ANALYSIS: The SPSS statistical software for social science version 22 was used for all statistical analyses. To characterise the quantitative variables, descriptive statistics were used in numerical form (mean, SD, or percentages). The qualitative factors were described using diagrammatic and tabular representations. The Chi-square test for categorical variables and the (t) test for continuous variables with normally distributed data were used to determine the significance of associations between variables. Fisher's Mann-Whitney tests and exact tests for categorical variables. Non-normally distributed data was tested using U tests for continuous variables. Statistical significance was defined as two-sided p-values of less than 0.05.

RESULTS

	Study groups			
Variables	Mitomycin C + Dexamethasone (N=20)	PRP (N=20)	**All patients** (N=40)	**P value**
Penile pain				
Yes	13 (65)	12 (60)	25 (63)	0.5
No	7 (35)	8 (40)	15 (37)	
Penile curvature				
Yes	18 (90)	18 (90)	36 (90)	0.6
No	2 (10)	2 (10)	4 (10)	
Mean ±SD	22.7±16.6	25.5±17.4	24.1±17.1	0.3
Plaque site				
Dorsal	8 (40)	9 (45)	17 (43)	0.7
Ventral	4 (20)	6 (30)	10 (25)	
Right lateral	3 (15)	3 (15)	6 (15)	
Left lateral	2 (10)	1 (5)	3 (7)	
Dorso-lateral	3 (15)	1 (5)	4 (10)	

Data were presented as frequency and percent; n (%).Presented percent is column percent.
Please mention the mean Degree of Penile Curvatures in each group? (Added)

Table 1: Baseline characteristics of patients

Before treatment, approximately two thirds of patients had penile pain (63%), while the majority of them had penile curvature (90%). The most common site for plaque was dorsal, followed by ventral and right lateral (43%, 25%, and 15%, respectively). In terms of p, there was no statistically significant difference between the two group regarding penile pain and curvature, and plaque site. Table 1

	Study groups			
Variables	Mitomycin C + Dexamethasone (N=20)	PRP (N=20)	**All patients** (N=40)	**P value**
Penile pain				
Pre-treatment	8.7 ± 8.1	7.9 ± 8.3	8.3 ± 8.1	P1:0.9
Post-treatment	6.2 ± 6.2	6.3 ± 6.9	6.3 ± 6.5	P2:0.9
P value	P3:<0.001	P4:<0.001	P5:<0.001	
Pre-treatment	13.5 ± 6.1	12.1 ± 6.4	12.8 ± 6.2	P1:0.4
Post-treatment	11.5 ± 5.5	10.1 ± 5.5	10.8 ± 5.5	P2:0.3
P value	P3:<0.001	P4:<0.001	P5:<0.001	
Pre-treatment	9.4 ± 4.2	8.8 ± 4.7	9.1 ± 4.4	P1:0.6
Post-treatment	6.9 ± 3.7	6.7 ± 4.0	6.8 ± 3.8	P2:0.8
P value	P3:<0.001	P4:<0.001	P5:<0.001	

Data were presented as mean and standard deviation. P1: P value of comparison of pre-treatment values of both groups, P2: P value of comparison of post-treatment values of both groups, P3: P value of P4: P value of comparison of pre-treatment versus post-treatment values in group 2, P5: P value of comparison of pre-treatment versus post-treatment values in both groups

Table 2: PDQ domains among study groups

PDQ domains were compared between two groups before and after treatment with both treatment options. There was highly significant clinical and statistical difference before and after treatment in each study group. Patients witnessed reduction in mean of scores of all PDQ domain including: Penile pain, Physical and psychological Symptom, and Symptom bother. No statistically significant difference concerning pre-treatment domains between both groups (P1). This was similar with post-treatment domains as well (P2). Table 2

	Study groups			
Variables	Mitomycin C + Dexamethasone (N=20)	PRP (N=20)	**All patients** (N=40)	**P value**
Pre-treatment	16.4 ± 3.2	14.7 ± 3.1	15.5 ± 3.2	P1: 0.09
Post-treatment	18.4 ± 3.3	19.1 ± 2.8	18.7 ± 3.0	P2: 0.5
P value	P3: <0.001	P4: <0.001	P5: <0.001	

The data was presented in the form of a mean and standard deviation. P1: P value of pre-treatment versus post-treatment values in both groups, P2: P value of post-treatment values in both groups, P3: P value of comparison of pre-treatment versus post-treatment values in group 1, P4: P value of comparison of pre-treatment versus post-treatment values in group 2, P5: P value of comparison of pre-treatment versus post-treatment values in both groups

Table 3: IIEF score among study groups

IIEF scores were statistically significant before and after treatment <0.001. In group 1: the mean IIEF score increased from 16.3±3.3 to 18.2±3.2; <0.001), while in group 2, the mean IIEF score increased from 14.7±3.1 to 19.0±2.8;: <0.001). Of notice, improvement was better with group 2 as the difference in mean was higher (-4.3) than in group 1 (-1.9); however, that difference was statistically insignificant. Table 3

	Study groups				
Variables	Mitomycin C + Dexamethasone (N=20)		PRP (N=20)		**P value**
Degree of curvature					
	Pre	Post	Pre	Post	
No curvature	2 (10)	4 (20)	2 (10)	2 (10)	P1:<0.001
Mild	5 (25)	13 (65)	4 (20)	12 (60)	P2: <0.001
Moderate	10 (50)	3 (15)	12 (60)	5 (25)	P3:0.9
Severe	3 (15)	0 (0)	2 (10)	1 (5)	P4:0.03
Erectile function					
	Pre	Post	Pre	Post	
E3	10 (50)	7 (35)	11 (55)	4 (20)	P1:0.001
E4	7 (35)	8 (40)	8 (40)	6 (30)	P2:0.002
E5	3 (15)	5 (25)	1 (5)	10 (50)	P3:0.5
					P4: 0.04

P1: P value of comparison of pre-treatment versus post-treatment values in group 1, P2: P value of comparison of pre-treatment versus post-treatment values in group 2, P3: P value of comparison of pre-treatment values of both groups, P4: P value of comparison of post-treatment values of both groups.

Table 4: ICI test results among study groups

ICI test results were statistically significant different before and after treatment in both study groups. Concerning erectile function, both groups showed improvement; but it was remarkable with the PRP group. 80% of PRP group could achieve E4 and E5 scores, while only 65% of group 1 did. Those differences were statistically significant. Table 4

	Study groups				
Variables	Mitomycin C + Dexamethasone (N=20)		PRP (N=20)		**P value**
Size of plaque					
	Pre	Post	Pre	Post	
< 1 cm	5 (25)	17 (85)	4 (20)	14 (70)	P1:0.01
1-2 cm	12 (60)	3 (15)	12 (60)	4 (20)	P2:0.004
> 2 cm	3 (15)	0 (0)	4 (20)	2 (10)	P3:0.9
					P4:0.02

P1: P value of comparison of pre-treatment versus post-treatment values in group 1, P2: P value of comparison of pre-treatment versus post-treatment values in group 2, P3: P value of comparison of pre-treatment values of both groups, P4: P value of comparison of post-treatment values of both groups.

Table 5: Penile duplex findings among study groups

The parameters of penile duplex showed that significant number of patients witnessed remarkable decrease in plaque size. For example, more than half the patients in group1 had a plaque size of more than 1 cm, after

treatment, 85% of patients had a plaque size of less than 1 cm. To a lesser extent, in group 2, 80% of patients had a plaque size of more than 1 cm, after treatment, 70% had a plaque size of less than 1 cm. that difference was statistically significant Table 5

	Study groups			
Variables	Mitomycin C + Dexamethasone (N=20)	PRP (N=20)	Total (N=40)	**P value**
No complications	8 (40)	17 (85)	25 (62)	
Procedural pain	9 (45)	0 (0)	9 (23)	
Local erythema	2 (10)	0 (0)	2 (5)	<0.01
Echymosis	1 (5)	2 (10)	3 (7)	
Hematoma	0 (0)	1 (5)	1 (3)	
Total	12 (60)	3 (15)	15 (38)	

Data were presented as number and percent.

Table 6: Incidence of complications among study groups

The overall incidence of complications was higher among group 1 (60%). Most common complications in group 1 were procedural pain followed by local erythema, which did not occur with group 2. Most common complications with group 2 were echymosis, followed by hematoma formation. There is a statistically significant difference in the overall incidence of complications between both study groups. One patient who received PRP injection suffered of worsening of his erectile function and increased in degree of curvature than before intervention after 3rd injection, the treatment with PRP was stopped. Table 6

DISCUSSION

The goal of this study was to compare the effectiveness of intralesional injection of platelet rich plasma versus Mitomycin-C plus Dexamethasone in treatment of early active Peyronie's Disease. In our study, we enrolled 40 patients with Peyronie's disease. , 20 patients received Mitomycin C + Dexamethasone (Group 1), and 20 patients received PRP injection (Group 2). The two groups were matched for socio-demographic features, medical history and characteristics of Peyronie's disease. Patients were assessed before and 3 months after receiving treatment using PDQ, IIEF, ICI test, and penile duplex. In addition, the incidence of complications was calculated after receiving treatment. The average age of the patients was 51.9 years, and duration of Peyronie's disease was 7.1 months. These results were similar to the results of a study conducted by Raghupathi and Raghavendra, [7] There were 21 patients having peyronies disease symptoms, with a mean age of 44.48 and a 5.6-month symptom duration. 7 There were multiple associated comorbidites; most commonly diabetes (40 %) and hypertension (25%). Around 40% of the participants were smokers. Less 10% of patients had Dupuytren's contracture and genital trauma in the past (22%). The mean duration of Peyronie's disease was 7.1 months. No statistical significance between both groups regarding any of these parameters. Our study results are partially in agreement with the previously mentioned study conducted by Raghupathi and Raghavendra, [7] that showed the majority of patients had diabetes (57.1%) and tobacco consumption (61.9%).Before treatment; approximately two thirds of patients had penile pain (63%), while the majority of them had penile curvature (90%). Similar results was obtained by Raghupathi and Raghavendra, [7] According to the study, Penile plaque and curvature were observed in all 21 patients (100%) and penile pain was observed in 17 patients during erection (80.95 percent). Penile pain during erection was detected in 27% of PD patients, as was penile curvature in 49%, and a palpable plaque in 39% of PD patients.

Raghupathi and Raghavendra, [7] The dorsal was the most common site of penile plaque, which was observed in 16 of the patients (76.2 percent). Two patients (9.5 percent) had plaque in the dorso-ventral region, two patients (9.5 percent) had plaque in the right-lateral region, and one patient had plaque in the ventral region (4.8 percent). These findings are partly in line with what we found in our research. results that showed the most common site for plaque was dorsal, followed by ventral and right lateral (43%, 25%, and 15%, respectively). Improvement in erectile function was seen in group I patients who received intralesional injection of Mitomycin-C plus Dexamethasone via increase in the median IIEF score from 17 to 19 (mean±SD: 16.3±3.3 to 18.2±3.2 respectively, with significant difference between pretreatment and 3 months post treatment (p value: <0.001). Regarding ICI test, 65% of patients treated with intralesional injection of Mitomycin-C plus Dexamethasone could achieve E4 and E5 scores (P value = 0.001).These findings are consistent with those of a recent report by Raghupathi and Raghavendra, [7] At each follow-up, To detect ED, the IIEF-15 questionnaire was employed, and the IIEF score was recorded. The average IIEF score was 39.9 at the start, which improved to 41.1 in the first month and 42.5 after three months of treatment. The IIEF-15 score improved considerably from the baseline IIFE-15 score at the 1st and 3rd month of follow up (p=0.003).

Statistically significant different before and after treatment was found in penile curvature and plaque size of group I patients. Before treatment about half number of patients had moderate degree of curvature, in addition to 15% of sever degree; after treatment 65% of patients had mild degree, with no severe cases reported after treatment (P value<0.001). This in agreement with the study conducted by Raghupathi and Raghavendra, [7] The overall response rate was 71.4 percent (15 out of 21) after three months of intralesional therapy, which was statistically significant. On subgroup analysis, 90 percent of patients in the 30-60° group improved

their curvature with a decrease in curvature from 30-60° to 30°, all the patients in >60° group showed improvement in curvature with decrease in curvature from >60° to 30-60° whereas 4 out of 9 patients in <30° group showed complete improvement in curvature with p value of (p=0.001). Regarding plaque size more than half the patients had a plaque size of more than 1 cm before treatment, after treatment, 85% of patients had a plaque size of less than 1 cm (P value 0.01). This is in accordance to the previously mentioned study by Raghupathi and Raghavendra, [7] They found that following three The total response rate for intralesional injection therapy was 66.66 percent, with 61.5 percent of patients reducing plaque size from 1-2cm to 1cm and 62.5 percent reducing plaque size from >2cm to 1-2cm. These improvements were statistically significant, according to statistics. Similarly, an animal study done by Kaya et al., [10] The goal of this study was to see if mitomycin-C (MMC) has an antifibrotic impact in a rat model of Peyronie's illness caused by transforming growth factor beta (TGF-) (PD).

He came to the conclusion that MMC had antifbrotic properties in a rat model of Parkinson's disease. Erectile function was significantly improved in Group II who received 4 treatments with intralesional injection of platelet rich plasma assessed using IIEF-5 score and ICI test. The median IIEF score increased from 14.5 to 19.5 (mean±SD: 14.7±3.1 to 19.0±2.8 respectively, p value: <0.001). ICI test results were statistically significant different before and after treatment with PRP, 80% of PRP group could achieve E4 and E5 scores (P value, 0.002).The results of our work match the results of a pilot study that was done by Matz et al., [11] They looked at the safety and feasibility of the platelet-rich fibrin matrix (PRFM) in four patients with ED, eleven with Peyronie's disease, and one with both Peyronie's disease and ED in a retrospective study. Patients that are undergoing PRFM therapy for ED and PD, objective improvements in the IIEF-5 score (4.14 points, 9.1%) were seen.

Penile curvature and plaque size was improved in group II who received PRP injection. More than half the patients had moderate degree of curvature, that pattern changed to more than half of them having mild degree, with only one case of severe degree with significant difference between pre and post treatment (P value: <0.001). 80% of patients had a plaque size of more than 1 cm, after treatment, 70% had a plaque size of less than 1 cm, that difference was statistically significant (P value:0.004). Our findings are consistent with those of Virag et al,. 12, who undertook four sessions of PRP therapy with hyaluronic acid (HA) in 13 patients with Parkinson's disease over the course of two months, with an average age of 57.5 years. PRP therapy was used in conjunction with HA. During the 9-month follow-up period, 10 (77%) of the 13 patients had a 30% decrease in curvature, and the density and size of plaques had decreased in 7 cases (53 percent). All of the patients' IIEF-5 scores improved.

The PRP composition was not examined by the authors. HA, according to the author, stabilises and prolongs the effects of PRP. Virag et al., 12 continued their investigation and published the results of a 90-patient study in 2017. Four injections of 8ml PRP and HA were given over the course of the treatment (each containing 6 ml PRP and 2 ml HA) were injected into the TA's ill spots every 15 days under DUS supervision. ; In addition, fibrous or calcified plaques were perforated with a 22G or 18G needle before the injection. According to the findings, the angle of penile curvature could be reduced to 6.54-10.51 degrees, and the thickness of the tunica albuginea could be reduced to 1.11-0.52 millimetres. Calcifications persisted in six patients, but their density decreased. Significant changes were seen in all three domains of the PDQ questionnaire. . Symptom bother subdomain of PDQ decreased from 11.39 to 8.93 (p= 0.002), Physical and psychological Symptom subdomain decreased from 7.09 to 5.92 (p= 0.021) and penile pain subdomain decreased from 9.15 to 5.88 (p< 0.001). Only patients with ED prior to the initiation of PD (n=11) saw a substantial improvement in IIEF-5 (13.82+/- 3.7 vs 17.91 +/- 3.2) (p=0.008).

Regarding adverse effects, patients reported only hematoma (10%) and ecchymosis (6.7%) [13]. Similarly to our results, PDQ domains showed statistically significant difference before and after treatment with PRP. Penile pain (7.9 ± 8.3 to 6.3 ± 6.9; P value: <0.001), Physical and psychological Symptom (12.1 ± 6.4 to10.1 ± 5.5; P value : <0.001), and Symptom bother (8.8 ± 4.7 to 6.7 ± 4.0 P value :< 0.001).

We concluded that both treatment options showed improvement in PDQ domains, and IIEF scores after treatment with no superiority of neither option. Additionnaly, degree of curvature and erectile dysfunction improved in both groups after treatment as well; but to a different extent. For instant, group 1 witnessed better improvement in degree of curvature than in group 2. While, in contrast, group 2 exceeded in erectile function. Similarly, plaque size was remarkably reduced in both groups after treatment; however, group 1 witnessed more redcution. Overall complications rate was noticed to be higher in group 1. The current study is the first prospective study that we are aware of., clinical trial evaluating the efficacy of Intralesional Injection of Platelet Rich Plasma Compared with Mitomycin-C plus Dexamesathone in Peyronie's Disease Treatment. The study's shortcomings were that it was a pilot trial was done with small number of patients with short duration of follow up and there was no placebo arm or blinding.

CONCLUSION

Intralesional injection of PRP and Mitomycin-C plus Dexamesathone could improve Peyronie's Disease symptoms. Mitomycin-C plus Dexamesathone more effective than PRP in Penile curvature and plaque size improvement, while PRP was more effective in improvement of erectile function.

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