

## EFFECTIVENESS OF CONSERVATIVE TREATMENT OF PEYRONIE'S DISEASE

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**ABSTRACT:** The article is devoted to the effectiveness of conservative treatment of Peyronie's disease. As a result, it was found that the drug Potaba affects Peyronie's plaque. The drug can slightly improve the existing curvature of the penis, there is a significant protective effect, especially if the effect is pronounced with a short course of the disease. Potassium para aminobenzoate is useful in stabilizing Peyronie's disease and is needed to prevent the progression of penile curvature, which "stops" the process. The plaque does not increase, and the angle of curvature does not increase. The stabilization stage comes faster and with fewer consequences. Group B with Peyronie's disease who received a combination of oral medications (vitamin A, E) and intralesional injections of kenalog and dexamethasone showed a significant improvement in penile curvature, pain, erectile function, and patient satisfaction. These data support the potential efficacy of this approach in treating the symptoms of Peyronie's disease. Further research, including randomized controlled trials and larger sample sizes, is needed to confirm these results and establish the optimal treatment protocol for patients with this complex condition. Those who received a combination of oral preparations (vitamins A, E), intralesional injections of kenalog and dexamethasone, and extracorporeal shock wave therapy increase the effectiveness of treatment up to 55.6%. After the termination of the course of treatment, if the curvature is only cosmetic in nature and does not interfere with sexual intercourse, and does not violate the erection, then the operation is not necessary. Unfortunately, no guarantees can be made about preventing the future progression of the disease. The results of the study indicate the effect of Potaba on Peyronie's plaque. The drug can slightly improve the existing curvature of the penis, there is a significant protective effect, especially if the effect is pronounced with a short course of the disease. Potassium para aminobenzoate is useful in stabilizing Peyronie's disease and is needed to prevent the progression of penile curvature, which "stops" the process. The plaque does not increase, and the angle of curvature does not increase. The stabilization stage comes faster and with fewer consequences.

**KEYWORDS:** Peyronie's disease, curvature, penis, fibrous plaque, deformity, erectile dysfunction, penile pain, trauma, intralesional injection, shock wave therapy.

### INTRODUCTION

Peyronie's disease is a relatively common disease characterized by the formation of fibrous plaques in the tissues of the penis, leading to penile curvature, pain, and sexual dysfunction [1]. Estimates of the

prevalence of Peyronie's disease range from 0.4% to 9% in the general male population, although the exact prevalence may be higher due to underreporting and misdiagnosis. It primarily affects middle-aged and elderly men, with the highest incidence observed between the ages of 40 and 60 years. However, Peyronie's disease can occur at any age. Several risk factors have been identified, including genetic predisposition, penile injury, and connective tissue disease [2,4,5,6]. Treatment of Peyronie's disease is aimed at relieving symptoms, improving sexual function, and minimizing psychological stress [3,5,6]. Treatment options vary depending on the severity of symptoms and patient preference. Conservative approaches such as oral medications such as vitamin E and antioxidants have been studied, but their effectiveness remains uncertain. Internally, focal injections of drugs including verapamil, collagenase, and corticosteroids such as Kenalog and dexamethasone have been shown to reduce plaque size, penile curvature, and pain. These injections are thought to modulate underlying inflammation and fibrosis. Surgery may be considered for patients with severe deformities or refractory symptoms. Procedures such as penile plication or implantation are aimed at correcting the curvature of the penis and restoring sexual function [1]. However, surgery comes with risks, including infection, hematoma, erectile dysfunction, and penile shortening.

**THE AIM OF THE STUDY** is to study the effectiveness of conservative treatment of Peyronie's disease.

#### **MATERIAL AND RESEARCH METHODS**

The study included 88 patients diagnosed with Peyronie's disease from 2007 to 2023. The age of the patients ranged from 31 to 62 years.

*Table 1. Division of patients by age*

| Age, year          | 31-41 | 42-52 | 53-62 |
|--------------------|-------|-------|-------|
| Number of patients | 8     | 23    | 57    |
| Share, in %        | 9,1   | 26,1  | 64,8  |

Thus, Peyronie's disease is most common in patients over 50 years of age.

Patients were divided into 3 groups according to the size of the plaque:

- Group I - 32 patients, plaque size up to 20 mm<sup>2</sup>;
- Group II - 38 patients, plaque size from 20 to 30 mm<sup>2</sup>;
- Group III - 18 patients, plaque size greater than 30 mm<sup>2</sup>.

Patients with plaques larger than 30 mm occur in 20.5% of cases and from 20 to 30 mm in 43.2% of cases. The duration of the illness ranged from 1 to 6 years. The duration of the disease was observed in 33 patients up to 1 year, in 38 patients from 1 to 3 years, and in 17 patients more than 3 years. The degree of curvature in 83.0% was up to 30°, and in 17.0% the curvature was about 45°.

Pain intensity was assessed on a 10-point system.

Depending on the chosen treatment regimens, patients were divided into three groups:

- group A 24 patients who received (oral preparations (vitamin A, E), potassium p-aminobenzoate (Potaba), lease injections, and potassium iodide electrophoresis);
- group B 26 patients who received (oral preparations (vitamin A, E) and intralesional injection of kenalog + dexamethasone);
- group C 38 patients who received (oral drugs (vitamin A, E), intralesional injection of kenalog + dexamethasone, and extracorporeal shock wave therapy).

The duration of treatment for each group was 12 months with breaks. Patients' medical records were analyzed, including baseline characteristics, treatment regimens, and follow-up visits.

Long-term outcomes were assessed by monitoring changes in penile curvature, pain levels, and sexual function over a period of 3 years (Figure 1).

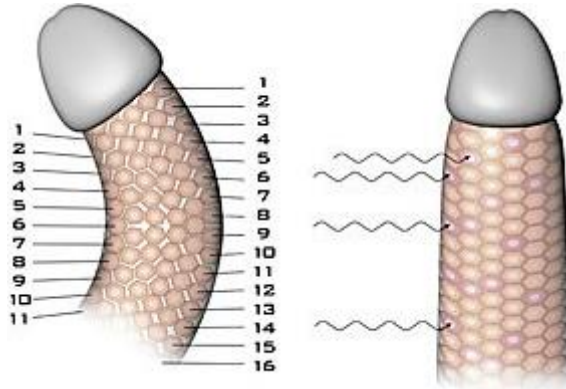


Figure 1. Measuring the degree of curvature

The following treatment regimens were prescribed:

Group A patients were given oral medications, including potassium p-aminobenzoate (Potaba); dosage, frequency, and duration of treatment were determined depending on the individual needs of the patient. Follow-up visits were carried out regularly to assess the progress of treatment.

Patients in group B received injectable drugs such as verapamil or corticosteroids, and kenalog directly into the plaque; the injection protocol included dosage, frequency, and number of injections per treatment session. Follow-up visits were scheduled to monitor the progress of treatment and adjust the regimen if necessary.

Group C (oral drugs (vitamin A, E), intralesional injection of kenalog + dexamethasone, and extracorporeal shock wave therapy); the number of treatment sessions, the intensity and frequency of shock waves were determined depending on the nature of the symptoms. Follow-up evaluations were conducted to evaluate treatment outcomes.

### THE RESULTS OBTAINED AND THEIR DISCUSSION

In group A, out of 24 patients, 19 patients (79.2%) with a disease duration of up to 1 year were under observation. They had non-calcified plaques and had not previously been treated with other methods. In addition to vitamins and injections of lidazy, I received Potaba 3 g 4 times a day for 12 months. Follow-up was carried out throughout the treatment period. Results were defined as regression in plaque size and/or reduction in penile curvature of at least 20% of the original curvature.

No serious adverse events occurred during treatment. The positive reaction rate was 68.4% for potassium p-aminobenzoate (Potaba). The mean plaque size decreased from 25.9 mm<sup>2</sup> to 20.2 mm<sup>2</sup> in group A.

Group B participants were selected based on their consent to oral medications (vitamins A, E) and intralesional injections of kenalog and dexamethasone. It has been suggested that vitamins A and E have antioxidant properties and potential anti-inflammatory effects, while Kenalog (triamcinolone acetonide)

and dexamethasone are corticosteroids known for their anti-inflammatory properties. The rationale for this combination of treatments is to target the fibrous plaques associated with Peyronie's disease to reduce inflammation, scar tissue, and subsequent curvature.

A long-term study of group B patients demonstrated significant improvements in several key areas. Penile curvature, measured using the International Peyronie's Disease Questionnaire (IPDQ) or photo documentation, showed a mean reduction of 26.9%. Pain scores assessed by visual analogue scale (VAS) significantly decreased in all sick patients and disappeared in 42.3% of patients. Erectile function, as measured by patient-reported results and validated questionnaires (eg, the International Erectile Function Index), showed improvement in 46.2% of cases. Patient satisfaction rates were high, with 53.8% of patients expressing overall satisfaction with treatment outcomes.

The combination of oral medications (vitamins A, E) and intralesional injections of kenalog and dexamethasone appears to be a promising treatment option for Peyronie's disease. The observed reduction in penile curvature, pain relief, and improvement in erectile function suggest that this regimen may effectively target fibrous plaques and associated inflammation. The antioxidant and anti-inflammatory properties of oral medications and corticosteroids likely contribute to the observed results.

In group C, the study aimed to evaluate the long-term effects of a multidimensional treatment approach aimed at improving symptoms, penile curvature, reducing pain, and overall patient satisfaction. ESWT uses low-intensity shock waves to stimulate neovascularization, promote tissue healing, and potentially destroy the fibrous plaques associated with Peyronie's disease. The combination of these methods is aimed at the effectiveness of the treatment of various aspects of the disease, aimed at eliminating inflammation, scar tissue and curvature. Baseline measurements of penile curvature, pain scores, erectile function, and patient satisfaction were recorded. Follow-up assessments were made 3 months later for 3 years.

A long-term study of group C patients showed promising results in many ways. Penile curvature assessed using the International Peyronie's Disease Questionnaire (IPDQ) or photographic documentation showed an average reduction of 65.8% in patients. Pain scores assessed by the visual analog scale (VAS) decreased significantly in 26 patients and disappeared in 12 patients. Erectile function improved by 52.6% of cases. Patient satisfaction scores were high, with 55.2% expressing overall satisfaction with treatment outcomes.

These results confirm the potential effectiveness of our multidimensional approach to treatment. Further research, including randomized controlled trials with larger sample sizes and longer follow-up periods, is needed.

Thus, in the first group, there was a decrease in the size of the plaque, this is most likely due to the early start of treatment, and in the third group, the improvement in results is associated with the synergistic effects of antioxidants, anti-inflammatory drugs, and shock wave therapy.

## CONCLUSIONS

1. The results of the study indicate the effect of Potaba on Peyronie's plaque. The drug can slightly improve the existing curvature of the penis, there is a significant protective effect, especially the effect is pronounced with a short course of the disease. Potassium paraaminobenzoate is useful in stabilizing

Peyronie's disease and is needed to prevent the progression of penile curvature, "stops" the process. The plaque does not increase, the angle of curvature does not increase. The stabilization stage comes faster and with less consequences.

2. Group B with Peyronie's disease treated with a combination of oral medications (vitamin A, E) and intralesional injections of kenalog and dexamethasone showed a significant improvement in penile curvature, pain, erectile function and patient satisfaction. These data support the potential efficacy of this approach in treating the symptoms of Peyronie's disease. Further research, including randomized controlled trials and larger sample sizes, is needed to confirm these results and establish the optimal treatment protocol for patients with this complex condition.
3. Those who received a combination of oral preparations (vitamins A, E), intralesional injections of kenalog and dexamethasone and extracorporeal shock wave therapy increase the effectiveness of treatment up to 55.6%.
4. After the termination of the course of treatment, the curvature is only cosmetic in nature and does not interfere with sexual intercourse, does not violate the erection, then the operation is not necessary. Unfortunately, no guarantees can be made regarding the prevention of disease progression in the future.

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