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Clinical Research

Clinical evaluation of *Apamarga-Ksharataila Uttarabasti* in the management of urethral stricture

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Abstract

Stricture urethra, though a rare condition, still is a rational and troublesome problem in the international society. Major complications caused by this disease are obstructed urine flow, urine stasis leading to urinary tract infection, calculi formation, etc. This condition can be correlated with *Mutramarga Sankocha* in Ayurveda. Modern medical science suggests urethral dilatation, which may cause bleeding, false passage and fistula formation in few cases. Surgical procedures have their own complications and limitations. *Uttarabasti,* a para-surgical procedure is the most effective available treatment in Ayurveda for the diseases of *Mutravaha Strotas*. In the present study, total 60 patients of urethral stricture were divided into two groups and treated with *Uttarabasti* (Group A) and urethral dilatation (Group B). The symptoms like obstructed urine flow, straining, dribbling and prolongation of micturation were assessed before and after treatment. The results of the study were significant on all the parameters.

Key words: *Mutramarga Sankocha,* stricture urethra, urethral dilatation, *Uttarabasti*

Introduction

From the study of ancient surgical text, *Sushruta Samhita*, it becomes evident that urological problems are an important part of medical sciences even during those days. It may be the reason that a clear and striking picture regarding their classification, symptomatology, complications and management are explained in all the classical texts. The earliest description about the afflictions of urinary tract can be traced back to *Atharva Veda*. Comprehensive description regarding *Mutraghata* and its treatment with the use of *Loha Shalaka* give as an account of knowledge that our ancestors had anatomical, physiological, pathological and therapeutic aspects of the human body.[1] As per Ayurvedic *Sharira Rachana*, *Mutravaha Srotas* includes *Vrukka* (kidney), *Gavini* (ureter), *Mutrashaya* (urinary bladder) and *Mutramarga* (urethra). *Ashtanga Hridaya* defines that urination is the function of *Vata*, and its vitiation settles in disturbed urinary functions.[2]

Sushruta has described 12 varieties of *Mutraghata* which is classified on the basis of dominance of *Doshas*, but *Vata* is the basic *Dosha* for all varieties of *Mutraghata*.[3] It is a condition in consequence with some kind of obstructive uropathy, mechanical or functional; related either to upper or lower urinary tract resulting into either partial or complete retention of urine as well as oliguria or anuria. The present study is concerned with the *Mutramarga Sankocha*, a condition afflicting *Mutravaha Srotas*. In this condition, there is obstructed urine flow, straining, dribbling and prolonged micturation.[4] In such condition *Uttarabasti* of medicated oils is the most effective available treatment described by the seers of Ayurveda.

Mutramarga Sankocha can be correlated with stricture urethra. Pathologically it becomes narrowed by a fibrotic tissue, which hampers excretion of urine. In modern science, the suggested treatment is urethral dilatation besides surgical treatment. It may cause bleeding, false passage and fistula formation. The surgical intervention like urethroplasty also carries high grade risk of recurrences.[5] Though the science has developed in many directions, it is unable to provide satisfactory treatment to patients without any complications and recurrences.

Seers highlighted the use of *Uttarabasti* in the management of *Mutramarga Sankocha*. Previous researches also highlighted that, *Uttarabasti* is effective in providing symptomatic relief in urethral stricture without any side effects.[6,7] The current study re-establishes the effect of *Uttarabasti* of medicated oil (*Apamarga Ksharataila*) in the management of urethral stricture.

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Materials and Methods

Sixty patients of urethral stricture satisfying inclusion criteria as described below were diagnosed, selected for the study and scrutinized before and after investigation over a period of 5 years with the approval of Institutional Ethics Committee (IEC). These patients were randomly allocated into two groups. Thirty patients in Group A were treated with *Apamarga Ksharataila Uttarabasti* and remaining 30 in Group B were treated with urethral dilatation. Computer generated randomization chart was used to generate randomization chart.

An understanding of the procedure was given to patients about the study, and a written consent was taken from the patients prior to participation in the trial. Ethical clearance was sought from the IEC of R. A. Podar Medical College, Worli, Mumbai (No. 7967 dated 15.6.2010).

Inclusion criteria

Patients of either sex of age 15-50 years with history of stricture urethra of mild to moderate symptoms were selected for the study.

Exclusion criteria

Patients of impacted calculus in the urethra and bladder neck, benign prostyatic hyperplesia, diabetes mellitus, nephrotic syndrome and neoplasm of lower urinary tract, congenital and severely symptomatic stricture urethra, human immunodeficiency virus (HIV) reactive and hepatitis B surface antigen (HbsAg) reactive patients were excluded from the study.

Apamarga Ksharataila

The test formulation *Apamarga Ksharataila* was prepared by following standard guidelines of Bahishajya Ratnavali in the laboratory.[8] The finished product was packed in sterile containers to avoid possibilities of contamination.

Posology

To start with 5 ml instillation of *Taila* into the urethra on 1st day, was increased to 10 ml for the rest of the period. As seen in the literary review, the duration of *Uttarabasti* should be 3 days or more with an interval of 3 days and repeated again. Thus, 7 or 11 sittings of 21 or 33 days with the gap of 3 days in between, for instillation of medicine were decided.

The procedure was scheduled in the morning and immediate follow-up taken after 3 days up to seven or 11 sittings as per symptom score. Follow-up was done up to 6 months fortnightly. 1st day 1st sitting and 4th day 2nd sitting likewise total 7 sittings in 21 days were given as per the necessity and 11 sittings in 33 days.

For the patients of Group B, intermittent urethral dilatation with bougies was done biweekly for 1 week, weekly for 1 month and fortnightly for 3 months. Follow-up was done for 6 months.

Assessment criteria

Incomplete emptying, frequency, weak stream, dribbling and straining were assessed during the course of study. Symptoms were assessed before and after the treatment and percentage of relief was calculated based on scoring pattern of symptoms [Table 1].

Routine blood investigations

Complete blood count, erythrocyte sedimentation rate, blood sugar level (fasting and post lunch), urine routine and microscopic, Bleeding Time and Clotting Time T, HIV I and II, HbsAg, Venereal Disease Research Laboratory Test, Serum creatinin and blood urea nitrogen. The investigations were also done to exclude underlying pathology. As per necessity ascending urethrogram and ultrasonography (USG) before and after the treatment were done.

Table 1: Assessment of symptoms score

Symptoms	Not at all	Less than ½ the time	About ½ the time	Almost always
Incomplete emptying	0	1	2	3
Frequency	0	1	2	3
Weak stream	0	1	2	3
Dribbling	0	1	2	3
Straining	0	1	2	3

Scoring pattern

0-5 = Mildly symptomatic
6-10 = Moderately symptomatic
11-15 = Severely symptomatic.

Total effect of therapy

The effect of therapy was assessed in terms of cured, markedly improved, improved, and unchanged.
Cured = 75-100% relief from all signs and symptoms
Markedly improved = 50-75% relief
Improved = 25-50% relief
Unchanged = <25% relief.

Observations and Results

It is observed that, stricture urethra is more prevalent in the age group of 21-40 years and much more prevalent in males than in females.

According to gradation of uretral stricture, in Group A, 47% patients had mild, and 53% had moderate symptoms. In Group B, 53% had mild, and 47% had moderate urethral stricture. Majority of the patients (63.33%) in Group A had stricture due to the gonorrhea while 22.33% due to instrumentation and 13.33% due to trauma. Similarly, in Group B, 65.67% patients had stricture due to gonorrhea, 33.33% due to instrumentation and 10% patients due to trauma. Thus, it can be interpreted that gonorrhea is the commonest cause of stricture in the society and next commonest cause is instrumentation due to indwelling catheters. In this study, it was seen that the stricture is seen most commonly at bulbar urethra than membranous and prostatic urethra.

Registered patients of Group A have expressed 71.87% relief in incomplete emptying, while, it was 76.74% in Group B. Frequency was improved by 70.37% in Group A and in Group B, was 72.41%. Weak stream was cured by 69.23% in Group A, and in Group B it was cured by 75%. Dribbling was not reported by 71.11% in Group A and 78.37% in Group B.

Straining was not found in 73.17% patients after treatment in Group A while 76.74% patients didn't report it in Group B.

On overall observation, patients of Group B showed better response in comparison to Group A by the end of the treatment.

However, recurrence of symptoms was observed in both groups. The percentage of recurrences was more in case of Group B than Group A. Based on this, it can be said that, Group A provides better effect with minimal chances of recurrences.

Total effect of therapy observed in 30 patients in Group A

Fifteen patients showed 75-100% relief in the symptoms. 11 patients were markedly improved.

Four patients were improved in the symptoms. None of patients were found to get relief below 25% immediately after completion of therapy.

Total effect of therapy observed in 30 patients in Group B

Nineteen patients showed 75-100% relief. Nine patients were markedly improved. Two patients were found to be improved. None of the patients were found to get relief below 25% immediately after completion of therapy.

After 6 months of follow-up relief observed in 30 patients of Group A

Ten patients showed 75-100% cured in the symptoms. 11 patients were markedly improved.

Seven patients were improved in the symptoms. Two patients were found to get relief below 25%.

After 6 months of follow-up relief observed in 30 patients of Group B

Nine patients showed 75-100% relief in the symptoms. Five patients were markedly improved.

Sixteen patients were found to get relief below 25%.

Assessment of therapy by urethrogram and USG

After treatment by *Uttarabasti* significant changes were observed. Size of stricture was reduced as well as residual volume of urine was reduced.

Discussion

Mutramarga Sankocha is a clinical entity where in vitiation of *Vata Dosha* specifically of *Apana Vayu*, sheltered in the *Basti* and *Medhra* occurs. *Hetu-Sevana* results in *Vikruti* of *Apana Vayu* in consequence to this, *Chala*, *Ruksha*, *Khara Guna* increases resulting into *Sansaktata* of *Mutramarga* and hence the *Mutramarga Sankocha*. There is a synergistic action of *Apamarga Ksharodaka Siddha Taila* and action of the *Uttarabasti*. *Apamarga Kshara* in the *Taila* form has the properties of the *Lekhana* and *Ksharana*.[9] Therefore, it might be resulting into the *Ksharana* and *Lekhana* of *Mutramarga gata sansaktata*. The *Ushna* and *Snigdha Guna* of *Tila Taila* pacifies the increased *Rukshatwa*, *Kharatwa* and *Chalatwa* of *Apana Vayu*, restoring its normal function and thus brings about *Stroto Shodhana* and local *Snehana* actions.

The study drug is directly instilled into the urethra, a known *Sthana* of *Vayu*, which gives direct access to the seat of *Srotovaigunya* and *Dosha Dushya Sammurchhana*. This directly acts on the *Vikruta Vayu* and breaks the *Samprapti*.

Conclusion

The study revealed that, *Apamarga Ksharataila Uttarabasti* is as good as that of dilatation technique. As recurrence with *Apamarga Ksharataila Uttarabasti* is significantly lesser, it is an ideal minimal invasive treatment in urethral stricture in an Indian setup and may be preferred in comparison to the dilatation methods. It is proposed that, continuing the treatment for a longer period with proper follow-up may avoid or postpone further complications.

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हिन्दी सारांश

अपामार्गक्षार तैल उत्तरबस्ति का मूत्रमार्ग संकोच में चिकित्सकीय अध्ययन

के. आर. रेड्डी

मूत्रमार्गसंकोच, यद्यपि काफी कम पायी जानेवाली व्याधि है, फिर भी यह अत्यंत कष्टदायी है । मूत्रप्रवृत्ति मे अवरोध, मूत्र का एक जगह रुकना, मूत्रमार्ग संक्रमण तथा अश्मरी आदि इस व्याधि के प्रमुख उपद्रव है । ''मूत्रमार्गसंकोच'' की तुलना stricture urethra से की जा सकती है । आधुनिक चिकित्सा शास्त्र मे इस व्याधि की मूत्रमार्गविकसन (urethral dilatation) हेतु चिकित्सा की जाती है, जिसके कारण मूत्रमार्ग मे रक्तस्राव, तथा भगन्दर का निर्माण हो सकता है । सभी शल्यक्रियाओं की अपनी सीमा और उपद्रव है । आयुर्वेद मे उपलब्ध अनुशल्यक्रियाओं मे उत्तरबस्ति यह मूत्रवह स्रोतस् की व्याधियोंके लिये सबसे प्रभावी चिकित्सा है । इस अनुसंधानात्मक अध्ययन मे कुल ६० रुग्णो को २ भागो मे विभाजित कर, ३० रुग्णोंको (विभाग–अ) उत्तरबस्ति चिकित्सा एवं ३० रुग्णोंको (विभाग–ब) मूत्रमार्गविकसन चिकित्सा दी गई । मूत्रमार्ग मे अवरोध, प्रवाहण, बूंद–बूंद मूत्रप्रवृत्ति, मूत्रप्रवृत्ति मे विलम्बन आदि लक्षणों को चिकित्सा के पूर्व और पश्चात मूल्यांकन पद्धती से प्रदर्शित किया गया है । अध्ययन के परिणाम सभी घटकों मे महत्वपूर्ण थे ।