



**ROLE OF GHRUT AS A LUBRICANT IN ENDO-UROLOGICAL PROCEDURES– A
CLINICAL REVIEW STUDY**

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ABSTRACT

Now a days most of the urological diseases are treated by endo-scopically, through cystoscope, ureteroscope (URSL), Nephroscope (PCNL), for introducing these scopes, lubrication is essential part and for this most of the modern surgeons as well as Ayurveda surgeons using water soluble xylocaine jelly 2 % for lubrication. Options for lubrication are rarely considered to be a matter for study in endo-urology. But is this the final option? Definitely not, in Ayurveda, Sushruta has evaluated in his scripture - '*The Ghruta*'. This would be a option for xylocaine jelly. Due to it's natural lubricant property, the ghruta is more beneficial and most appropriate lubricant agent for any type of endoscopes to introduce in particular strotasas & also ghrut is more compatible to human body. Ghruta is bovine product (i.e. Cow's ghrut), use of ghruta not only makes the procedure smoothly but also avoids post endo – urological complications like bleeding, infections & specially and very common urethral stricture. Ghrut have soothing as well as bacteriostatic properties. After using ghruta there is tremendously decreases in post endo-urological complications. So lubricant using ghrut i.e Group-A & lubricants using water soluble xylocaine gelly 2% i.e. Group – B. The following variables were evaluated in the two groups; the success rate depends over pain and degree of difficulty associated with examination and non formation of urethral stricture & other complications. No significant differences were found regarding to time for procedure. Level of pain and degree of difficulty during procedure were significantly smooth & lower in ghrut group i.e. Group-A. I observed no side effects or damage to the instrument.

KEYWORDS: Endo – urology, Ayurveda, lubrication, complications & Ghruta.

INTRODUCTION

निरुध्दप्रकशे नाडी लौहीमुभयतोमुखीम् I

दारवी वा जतुकृता घृताभ्यक्तां प्रवेशयेत् II ¹

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Maharshi Sushruta says, in the treatment of Phimosis, a tubular rod with hole on both side made up of steel, wooden or Lakh. Any one is taken & well lubricated with ghrut then introduce in glans penis through prepusal skin to relieve the obstruction.

Here Maharshi Sushruta has clearly mentioned that, for any tubular structure (i.e. Nadi-Yantram), when introduce in Mootravaha strotas (Urinary system) should be well lubricated with ghrut.

So I applied this over my patients since last 15 years of practice of endo-Urology. Why Maharshi Sushruta says only ghrut? and not suggests any other lubricants agent like tail, vasa & majja. Because of cow's ghrut is more compatible for human body. Ghrut has – Soothing, bacteriostatic properties naturally and it's lubrication

persists for long period & oleate internally the strotasas like urethra and ureter continuously. This is a *Abhyantar Snehan* Requirement of long time oleation of this organ is most important. Because the tissue of this part are very meticulous & in endo- urological procedures foley's rubber & various types of catheters as well as D.J. stents are continuously fractioning the local tissue & mucous membrane which causes trauma --- bleeding---- infection----fibrosis-----narrowing of the lumen ----- finally----- stricture or stenosis formation will take place.

For this friction process, one can not avoid because after endo-urological procedure, placement of D.J. Stent & foley's rubber catheter is mandatory. But most of the surgeons using water soluble xylocaine jelly 2% for lubrication of the urethra but after some period that gelly will dried or easily washed out within continuous irrigation of NS during surgical procedure as the gelly is water soluble & catheters acts as foreign body in it & there is continuous friction process is going on. For that inner layer of urethra, continuous secreting the mucous to lubricate the local area, but every tissue has it's limit, after some period mucous secretions will stop & long standing catheters make trauma, this causes strictures &

patient will again undergo for further endo-urological procedure i.e. stricture urethra (V.I.U.) But this is not enough or ends, after this patient will have to do CIC for long life. (CIC means clean intermittent catheterization - a procedure for patient who have trouble in micturation by normal way, in this procedure, patient is insert a catheter, a thin, hollow tube, into the urethra by himself to help for urination). This ratio is near about 10:2, means every 2 patients will suffer from urethral stricture after endo-urological procedures & that is iatrogenic.. Here I am not blaming only to xylocaine gelly but many other reasons are there like harshly insertion of catheters or traumatic cystoscopy, quality of catheters, not following aseptic precautions, infection, age factors, etc.

So I made search to overcome this problem & I was dam sure that in Sushruta Samhita, there will definitely be a solution & finally I found this version, since that date, I using plain cow's ghrut as lubricants in all endo-urological procedures & found that, level of pain & degree of difficulty during procedure were significantly lower in the ghrut group. (i.e.Group-A). Also I observed no side effects for patients or damage to the instrument. Not only this, but also found that, there is no post procedure urethral bleeding, infection (due to the long acting bacteriostatic action of ghrut), so recovery is fast, no more days antibiotics required, due to the ghrut oleation, less friction between catheters & local tissues, so normal tissue will preserve properly, mucous membrane will safe, so that patient can easily tolerate the catheterization.

But all these things not seen when water soluble xylocaine jelly was used. This gelly is lubricates temporary but after some period it becomes dried & found that there is severe friction between catheter & local mucous membrane of urethra. So patient continuously complaining of pain in urethra. Some patients does not tolerate due to irritation.

Another point is to be noted here that, all kinds of antibiotics are directly goes into the circulatory system, which are definitely increases the dryness (Rukshata) in the body. This will also hamper the mucous secretaions of mucous membrane of urethra.

AIMS AND OBJECTS

To compare the plain cow's ghrut (Group-A) & water soluble xylocain gelly 2% (Group- B) as a lubricant agent in Endo- urological procedures.

Methodology - Material

- Plain Cow's Ghrut.
- Xylocain gelly 2%

Methods –

- Total 30 + 30 patients has been taken for this study.
- For 30 patients - use of plain ghrut as a lubricant i.e. (Group-A – Trial Group).

- For another 30 patients, use of water soluble xylocaine jelly 2% as a lubricants (Group-B – Control Group) for endo- urological procedure.
- Only male patient are selected for this study.
- Warm Ghrut is used (Appropriate quantity).
- Slowly Injecting of liquid ghrut directly in urethra by 10 ml syringe & also lubricates the all endo-urological instruments.
- Same procedure is applied with water soluble xylocaine jelly 2% i.e Group-B.

Inclusive criteria

Age - 30 to 70 year.

Sex – Male patients only.

Diseases in which endo-urological procedures is to be done like

- Urethral calculi,
- Urethral stricture,
- BPH,
- Bladder calculi,
- Ureteric Calculi,
- D.J. Stent removal (Post PCNL), etc.

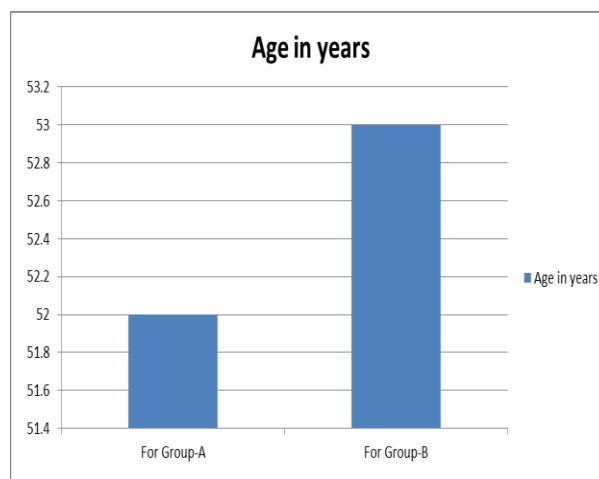
Exclusive criteria – Patient with DM + Hypertension

- Any endo / open urological surgery should not done before.

Data Analysis

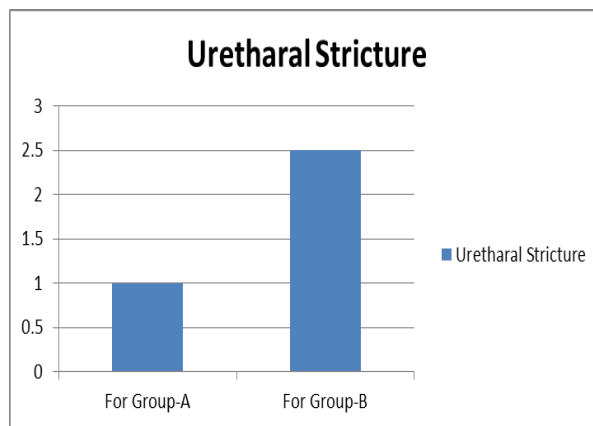
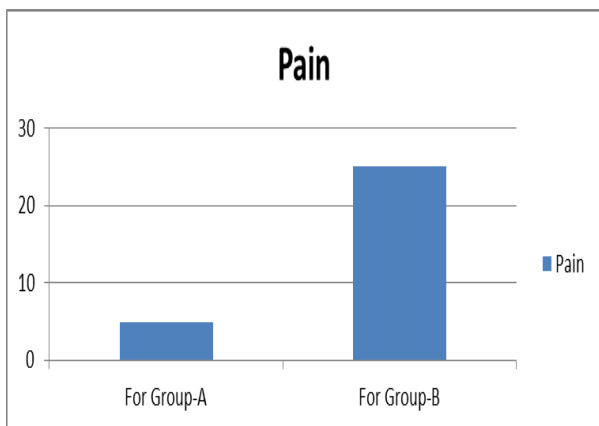
1) Age

	Mean value
For Group - A	52 yr.
For Group - B	53 yr.



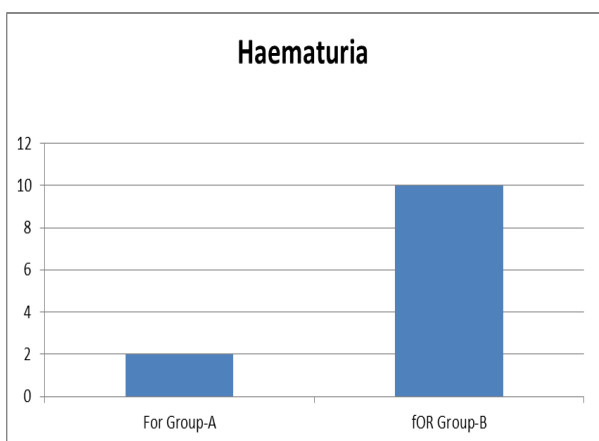
2) Pain – (Post procedure & catheterization)

	Pain Presents
For Group - A	5
For Group - B	25



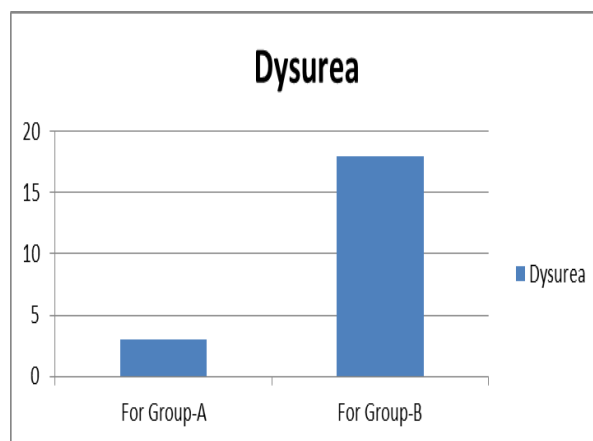
3) Haematuria

	Haematuria
For Group - A	2
For Group - B	10



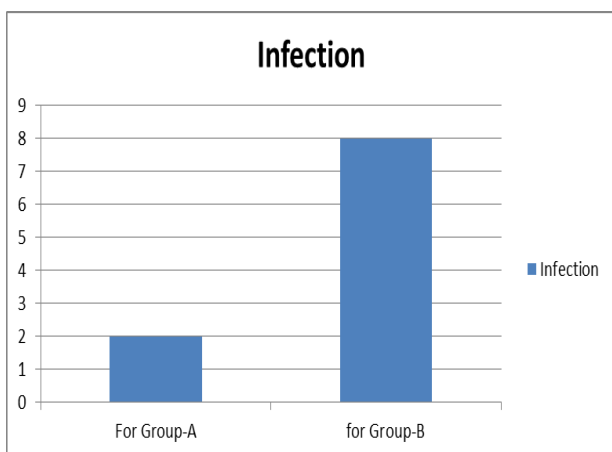
6) Dysurea - (Post Procedure)

	Dysurea
For Group - A	03
For Group - B	18



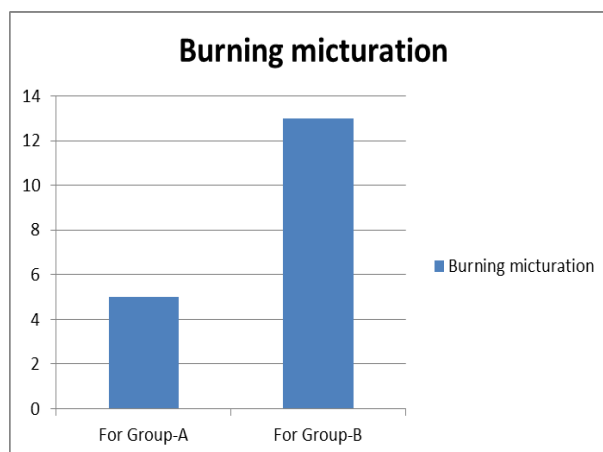
4) Infection – (Post Procedure)

	Infection
For Group - A	2
For Group - B	8



7) Burning micturation

	Burning micturation
For Group - A	05
For Group - B	13

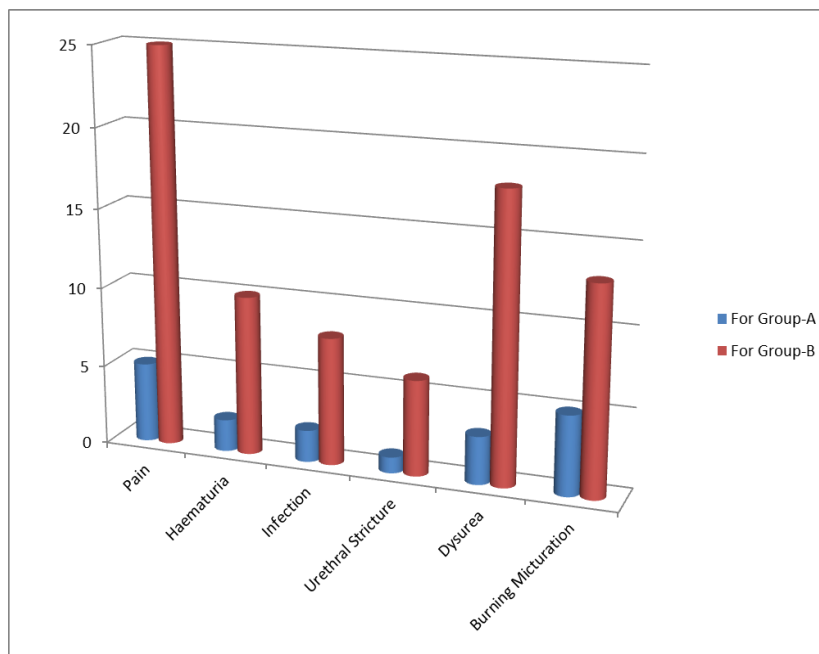


5) Urethral Stricture

	Urethral Stricture
For Group - A	01
For Group - B	06

8) Master Table.

	For Group-A (Trial Group - Plain Ghrut)	For Group-B (Control Group -Xylocaine jelly)
Pain	05	25
Haematuria	02	10
Infection	02	08
Urethral Stricture	01	06
Dysurea	03	18
Burning micturation	05	13

**OBSERVATION**

Certainly patients are less suffered symptomatically from Group - A (i.e. Trial Group of plain ghрут). Lubrication of ghрут is persists for long time, which is definitely helpful to patient & toleration of catheters are increased. It is observed that, patients are suffered less in all symptoms like pain, haematuria, infection, urithral stricture, dysurea, burning micturation. Generally we can say, there is more relief in patients of Group-A than patients of Group-B.

RESULT

Group - A (i.e. Trial group of plain ghрут), is more helpful in lubrication for endo-urolological procedures than Group - B (i.e. Control group of xylocaine jelly).

CONCLUSION

The proposed technique is simple, safe and inexpensive method for easier and less painfull endo- urolological procedures; moreover, it might facilitate difficult examinations. Further studies are needed to confirm this data and to ensure that the use of this technique is not liable to damage the scope.

Plain ghрут is more significant than water soluble xylocaine jelly 2% for avoiding the complications & faster recovery in endo -urolological procedures.

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