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CASE REPORT

Ayurvedic management of hypocontractile detrusor- a case study

Reshma T K[1*], Seena S[2] & Remya Vijayan[3]

[1]MD (Ayu), [2]Professor and HOD, [3]Assistant Professor
Department of Panchakama,Govt Ayurveda College ,Tripunithura, Kerala, India

*Email: dr.reshmanup@gmail.com

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Abstract

Hypocontractile detrusor or detrusor underactivity is increasing day by day. Symptoms of underactive bladder include slow urinary stream, hesitancy, and straining to void, with or without feeling of incomplete bladder emptying sometimes with storage symptoms. In this particular case the disease occurred after her delivery (FTND). Hypocontractile detrusor can be corelated with *mutrakrcchra* in Ayurveda where there is derangement in normal urination process associated with difficulty in urination and dysuria. *Avagaha sweda* is specifically indicated for the treatment of *mutrakrcchra.* Role of *Ayurveda* especially *avagaha sweda* in hypocontractile detrusor resulted due to strenuous labor is the subject of this study. By proper administration of *avagaha sweda*; the usage of catheter can be avoided. Thus to improve the quality of life of patients who are effected with Hypocontractile detrusor Along with that we can explore the efficacy of *Ayurvedic* management and *panchakarma* procedures in this particular disease more precisely and accurately.

Introduction

Urinary bladder consists of the body, neck and internal urethral sphincter. The smooth muscle forming the body of bladder is called detrusor muscle. It is formed by three ill-defined layers of muscle fibers, viz. the inner longitudinal layer, middle circular layer and outer longitudinal layer. The distal end of the bladder is guarded by internal urethral sphincter. This sphincter is made up of detrusor muscle[1]. And it empties the bladder when it contracts. Micturition reflex is elicited by the stimulation of stretch receptors situated on the wall of urinary bladder and urethra. Once the micturition reflex begins, it is self regenerative, i.e the initial contraction of bladder further activates the receptors to cause still further increase in sensory impulses from bladder and urethra. These impulses in turn cause further increase in reflex contraction of bladder. The cycle continues repeatedly until the force of contraction of bladder reaches the maximum and the urine is voided completely[2].

Hypocontractile detrusor

There is no widely accepted clinical tool to identify the disease. According to

the international continence society report in 2002 detrusor underactivity is defined as a contraction of reduced strength and/ or duration, resulting in prolonged bladder emptying and/or failure to achieve complete bladder emptying within a normal time span. The most commonly observed symptoms among patients with detrusor under activity are hesitancy, sensation of incomplete emptying caused by an increase post voidal residual, straining to void, urgency, increased frequency, nocturia, and incontinence. Recurrent urinary tract infections are also there due to persistent building up of urine[3]. It is better to diagnose detrusor under activity with the help of urodynamic findings along with clinical symptoms. It is very difficult to identify the prevalence rate. Only certain studies have reported the prevalence of detrusor under activity accounts for 9%-28% of men <50 years of age and 12-45% in older women[4]. Research works related to the treatment of detrusor muscle under activity is very rare.

Mutrakrcchra

The word *mutrakrcchra* comprises of two words, *mutra* and *krcchra*, it indicates *krcchra pravrithi* of *mutra*. *Lakshana* of *mutrakrcchra* includes difficulty in urination, pain in the region of bladder, groins, severe pain while urinating, *romaharsha* (horripilation) etc[5]. In this subject main *nidana* behind the *mutrakrcchra* was *abhigata* of *vasti*, a *marma sthana*, occurred during strenuous labor. Hence *nidana* directly leads to vitiation of *mutravaha srotas*. During the description of *vatika mutrakrcchra Acharya Vaghbhata* describes *adhonabhi pradesha abhyanga* with *vatahara taila, swedana* procedures like *pinda, avagaha sweda*.While commenting on this *Arunadatta* mentiones *balataila* for *adhonabhi abhyanga*[6].

Materials and Methods

Case report

Female patient aged 27 years approached 2 months after her delivery [FTND], complaints of inability to void urine voluntarily after delivery; she was on catheter for the past 1 month and 2 weeks. (Using intermittent self catheter for last 1 week). There was history of recurrent urinary tract infection after delivery. Severe lower abdominal pain appears whenever patient tries to urinate. Patient cannot void the urine without the help of catheter.

History of present illness

2 months back patient had FTND, female baby 2.565 kg with no ante partum &intra partum complications. H/o incomplete voiding of urine, hesitancy, increased frequency, painful urination after delivery and was catheterized after 12th day of delivery. Initial period of catheterization patient had hematuria for 4-5 days. Urinary bladder was palpable at that time. For the past one week patient was using intermittent self catheter .There is extreme pain when patient starts urinating and patient was not able to void urine voluntarily without the help of catheter. All these were associated with recurrent urinary tract infection.

General examination

Vitals –Stable, afebrile, no pallor

Blood pressure-110/70 mmHg

Temp –Afebrile

Pulse- 70/min

RR- 16/min

Weight -45 kg

Systemic examination

CVS : S1S2 heard, no abnormal sound was present

CNS- Conscious and oriented

RS- chest clear AE-B/L

PA- Mild tenderness present over hypogastric region

Ashtavidha pareeksha

Nadi - *Manda*

Mootram - *Rudhagati*

Malam - *Badham*

Jihwa - *Anupaliptham*

Sabda - *Vyaktha*

Sparsha - *Anushnaseetham*

Drik - *Vyktham*

Akriti - *Karshyam*

Blood investigations

TSH, RFT, LFT	:	NAD
URE-Pus cells	:	10-12/HPF
RBC	:	Nil/HPF
Epithelial cells	:	3-5/HPF

Cystometry- pressure flow study-multi-channel-CMG

Bladder capacity	: Normal
Maximum cystometric capacity	: 530 ml
Bladder sensation	: Normal
Bladder compliance	: Normal
Detrusor activity	: Nil during filling phase

Voiding phase

Patient cannot void on command, on attempted voiding there was minimal increase in detrusor pressure

PVR - 530ml

Impression - Hypocontractile detrusor

Treatment

1. Avagaha sweda- 42 days

Abhyngapoorvaka avagaha sweda.

Talam : *Rasnadi choornam*

Abhyanga : *Abhyanga* with *Bala taila* is applied around the umbilicus up to the thighs(*adho nabhi*)

Avagaha

The patient should be seated comfortably in the tub containing *ushnodaka* in such a way that her lower part of the body should be submerged above the level of umbilicus. When the dravya cools down, some amount of it should be replaced by warm water, thus keeping the temperature uniform.

2. *Paschat karma*

After the prescribed time ,body should be wiped off with towel.*Talam* should also be dried with a towel, advised to take rest for half an hour and followed –by bath with luke warm water.

3. phases of treatment plan- Total 42 day's treatments

Initial phase

14 days *avagaha sweda* followed by 7 days rest

Second phase

14 days *avagaha sweda* followed by 7 days rest

Third phase

14 days *avagaha sweda* followed by 7 days rest

Observation

Symptoms	Before treatment	After 1st phase	After 2nd phase	After 3rd phase
Voiding of urine	Using intermittent catheter (4 times/ day)	Using intermittent catheter (4 times/ day)	Partially Using catheter (4 times/day)	Complete withdrawal of catheter
Pain while patient starts to urinate without the help of catheter	VAS-10/10	VAS-8/10	VAS-5/10	VAS- 1-2/10
Intermittent lower abdominal pain	VAS 7/10	VAS 6/10	VAS 1-2/10	VAS -0/10
Tenderness over hypogastrium	Grade 1	Grade 1	Absent	Absent
Color of urine	Yellowish	Slight yellow	Slight yellow	Slight yellow
Sensation of urge urination	Absent	Absent	Absent	Present
Urination without the help of catheter	Not possible	Voids only 2-3 drops in 10 minutes	Partially void urine without the help of catheter. Remaining amount removed by using catheter	Completely void urine without the help of catheter
Hesitancy	Present	Present	Present	Absent
Straining to void	Present	Present	Reduced	Absent
Time taken to initiate urination	Not possible	10 minutes	2-3 minutes	Immediately
Bowel pattern	Not regular	Regular	Regular	Regular
Stress (0-5 scale)	5/5	4/5	2/5	0/5

Discussion

In this condition normal function of *vata* is affected. There is derangement in normal movement of detrusor muscle. Subject had abnormal *mutra nishkramana pravriti* due to *apana vata vaigunya*. Here the *vata vaigunya* can be corrected by selecting appropriate *vata samana chikitsa. Vata upakramas* mainly includes *sneha, sweda, and mrudu sodhana.* In this case swedana is selected. Due to the *sthanika prabhava* of *avagaha sweda* in *adhonabhi pradesha* the *avagaha sweda* is selected for correcting *vata vaigunya (Apana vata vaigunya*). Here the medicine selected for *avagaha sweda* is *ushnodaka*.*Ushnodaka* is swedakaraka.By the proper administration of *avagaha sweda anuloma gati* of *vata* can be attained. This is results into normal *mutra nishkramana pravriti.*And thus reduction of above said symptoms. Along with *avagaha sweda snehana* was done as *adhonabhi abhyanga* with *bala tailam*. .To pacifies the *vata prakopa* and to regain the *mamsa, peshi bala* opted *bala taila* for *abhyanga*.

In this particular case 42 days of *avagaha sweda* is administered as three phases with 7 days gap in between. Due to *avara rogibala* subject was not fit for prolonged *swedana* procedure, *theekshna aushadha sevana, snehapana* etc. So the treatment option chosen *avagaha* with rest period and it also helps for assessing the changes of subject after each treatment period. Subject is more comfortable due to the rest period.

Before treatment subject can't void urine without the help of catheter. Whenever subject starts to urinate without the help of catheter severe pain appears on lower

abdomen. After the first phase of treatment there is reduction in intensity of lower abdominal pain, bowel pattern became regular, subject can void 2-3 drops of urine after 10 minutes without the help of catheter. After the second phase of treatment subject can void urine partially and post voidal urine was removed by using catheter. Subject doesn't have the sensation of urination so that subject was following specific time interval for removing urine. After the third phase the major change noticed was subject can sense the urge of urination and subject started to urinate without the help of catheter. But there is slight pain while initiating urination was present after the third phase.

Along with the above treatment modalities the internal snehana,veshtana,utharavasti,matravasti can also be selected for this particular disease.

Conclusion

Normal function of *vasti, a marma sthana*, is the major site of *vata* was affected in this particular disease. Here, opted milder form of *swedana* procedure which gives the desired effect in *apana vata vaigunya*. By the proper administration of *Ayurvedic* treatment modalities majority of the symptoms got corrected .Hence exact placement of *Ayurvedic* treatment by considering *roga* and *rogi* bala gives wonderful effect in correcting disease as well as maintaining health.

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