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ANATOMICAL STRUCTURES INVOLVER OF MUTRAVAHASTROTAS IN VATAKUNDALIKA.

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Abstract:

For better health, waste products should be removed from the body completely. If it remains behind, then it will lead to the start of many diseases which will hamper quality of life. In samhita waste products excreted out of the body are mala, mutra and sweda. Mutra is excreted out of the body to remove toxins from blood and purify it. Mutra is evacuated out of the body through the specified channel called mutravasrota. Srotas is explained by all acharya as it is an important channel for the body to move all the bhavpadhartha from one place to another. The pathway has to be clear in such a way that mala should be excreted out of the body effortlessly. Any deformity progresses which causes the obstruction will make it be retained in the body, causes disease. One of the mutravahastrotas vyadhi is "Vatakundalika" under mutraghata chapter. It is explained that aggravated vata moves in a circular direction in the bladder which cause severe pain, and heaviness of the bladder urine is passed as dribbling micturition that too in less quantity with the expulsion of feces. This disease is called vatakundalika.

Keywords:- Mutravahastota , Vatakundalika , Mutraghata, Uroflometry, Mutravittasang,

Srujedaalpaalpamathwa, Sarujaskam Shaneeshanee, Mutravihanti sasatambha.

INTRODUCTION

It is claimed that in order to be healthy, waste products should be entirely evacuated from the body; if they do not, they will cause a slew of ailments that would degrade one's quality of life. The samhita describes the waste materials ejected from the body as mala, mutra, and sweda. Mutra are excreted from the body in order to eliminate toxins from the blood and purify it. If urine is not entirely evacuated from the body, it can lead to a variety of disorders such as UTI, sepsis, mutrakrucha, mutraghata, and others. Mutra is removed from the body via the mutravasrota channel. Allacharya describes srotas as a vital route for the body to move all the bhavpadhartha from one location to another. Except for sira and dhamani, which have moolasthanas for the creation of specific bhavpadartha or dhatu and its conveyance in the body, srota is the lumen in sharir. Mutra-carrying srota have their origins in the basti and medhra, according to Sushruta samhitas. The channel must be clear so that mala can be eliminated easily from the body. However, if any deformity progresses and produces obstruction, it will be retained in the body, causing sickness. The name Vatakundalika is characterized as a mutravahastrotas vyadhi in the Samhita under Mutraghata. The vyadhi vatakundalika is defined in the samhita as exacerbated vata moving in a circular manner in the bladder, causing great agony. The heaviness of the

bladder urine is passed as dribbling micturition, and in smaller quantity than the feces. This condition is known as vatakundalika. The disease and its cure are explored in the classics, although the physical structures involved in vyadhi are not explicitly described. The urine retention should be due to a restriction in the pathway, which is also not explained. As a result, the research is being carried out in order to see and identify the structures involved in vatakundalika vyadhi. There are various tools available in modern science to examine and comprehend the structure's participation and the pathophysiology of the disease. The investigation was carried out with the use of a diagnostic examination to see the involvement of the structure of mutravasrota, which is helping in the samprapti of the vyadhi. The goals of this study are to conduct a literature review on mutravahasrota and vatakundalika and to comprehend the clinical anatomy using USG, radiographic findings, and uroflowmetry in the case of vatakundalika.

AIM & OBJECTIVES:

AIM:

To study anatomical structures involved of mutravahastrota in vatakundalika.

OBJECTIVES:

-To study the concept of vatakundalika.

-To study the structural changes of mutravahasrota in vatakundalikaby using urine test, USG, Uroflowmetry and X-ray examination.

REVIEW OF PREVIOUS WORK

Various studies have been carried out on Vata Vyadhi, mutra vyadhi all over India. But study on anatomical structure of mutravahasrotas involved in vatakundalika, the meaning and diagnosis of the Vata have not been carried out. Hence to evaluate clinical efficacy of the above siddhanta the present study titled anatomical structures involved of mutravahastrota in vatakundalika. was selected for the study.

REVIEW OF LITERATURE

In the classics the disease is elaborated with its treatment, but the anatomical structures involved in the vyadhi are not clearly mentioned. The retention of urine should be there because of obstruction in the pathway which is also not explained. So the study is carried out to see and identify the structures involved in vatakundalikavyadhi. Now in allopath there are somany techniques from which we can study and understand the structures involvement and the pathophysiology of the disease. So with the help of diagnostic examination the study was carried out to see the involvement of the structure of mutravasrota which are helping in the samprapti of the vyadhi. Objectives of this study are to review the literature on mutravahasrota and vatakundalika and to know the structure involved of mutravasrota on clinical examination by, USG, radiological findings, uroflowmetry in case of vatakundalika and thereby to understand the clinical anatomy.

Srotas

गृक्त्वि गृन्निर्गृद्य

The word srotas is derived from Sanskrit sru.

गृन्निर्गृद्यपि न्नाति न्नाति उद्विगर्गित गृन्निर्गृद्य
, बेर्गि उद्विगर्गित 30/12)

Meaning of sru is to secrete, to permeate, to flow. The structure through which substance is either secretes or circulated or transported is called srota.

गृन्निर्गृद्यपि न्नाति न्नाति उद्विगर्गित गृन्निर्गृद्य

, फर्गि उद्विगर्गित

Those structure having kha are called as srota.

गृन्निर्गृद्यपि न्नाति न्नाति उद्विगर्गित गृन्निर्गृद्य
गृन्निर्गृद्यपि न्नाति न्नाति उद्विगर्गित गृन्निर्गृद्य

All specific symptoms can be categorized under these 4 lakshana that are-

1. Atipravrutti
2. Sanga
3. Granthi
4. Vimargagaman

Mutravaha Srota

उड्डिनिंठु २०ए पतिंठुड्डिड्डि वड्डिगपुठिंड्डि वड्डि वरिं
पतिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं
su sh 9/12

There are two channels in number and there root being Urinary bladder and penis, If injury to it can cause hardness in urinary bladder, retention of urine and stiffness of penis.

उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं

(cÉ.zÉÉ 5/8)

Mutravaha srota have their roots in basti and vanksana.

Dushti lakshana

उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं

इवड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं

(cÉ.zÉÉ 5/8)

Symptomes of their dushti are excessive excretion, excessive obstruction or suppression, vitiated, diminished or frequent thick urine with pain indicate the dushti lakshana of mutravaha srotas.

Basti is one of the organ present at koshtangain central body cavity explained by acharya and explained in samhitas as.

Mutrashaya

उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं

(xÉÑ.ì)

É.3/20)

Urinary bladder is like bottle-gourd in appearance and provided with veins and ligaments. It is receptacle for urine, base of excrements and an important vital organ.

Location Of Basti-

उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं
उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं
(गर्किण्डसर्णि३६१८)

Urinary Bladder is situated in the space surrounded by umbilicus, back, waist, scrotum, rectum, groin, and penis and it has single opening, thin wall and facing downward.

Formation of urine

उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं
उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं
उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं
उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं
उड्डिनिंठु वड्डिगपुठिंड्डि वड्डि वरिं गपुठिंड्डि वड्डि वरिं
(गर्किण्डसर्णि३६२०.२३)

Urine carrying channels existing in intestines saturate the bladder with urine constantly as rivers do for the sea. Large number of opening of these channels is not visible due to minuteness.

Vatakundalika

Vata + Kundala

Vata is Tridosha vayu and Kundala is a ring, a particular disease of bladder.

In Monier and Williams it is explained as

Vatakundalika as- “The state of being circular”

It is one type of mutraghata vyadhi explained by many vaidya and in samhita. Acharya Charak, Acharya Sushruta, Acharya Vagbhata, and in madhavanidanhas explained the disease in there texts clearly and explained about the disease and there treatment.

Sushrut Samhita explains as:-

नद्रेतां हि न शीर्षिणां नातिक्लृप्तपत्रिंशजर्षिद्य
 ङ्ङि बिन्दिपरिर्त्तुं) दनाक्लीडकृपीफुड्डिड×उपी चय5द्यद्य
 गरं मण्डलं उरिर्निर्गामं मण्डपुंसिद्रिर्निर्गामं
 नापिडिकृपीफुड्डिडुपिर्निर्गामं नताहिं नपिर्निर्गामं चय6द्यद्य

(xÉÑ /E /58)

The bodily vayu deranged and aggravated through an extremely parched condition or through the voluntary repression of an urging towards micturition affects and retains the urine in the bladder, causing it to revolve in eddies within the cavity of that organ. It allows the urine to pass in small quantity or to dribble out in drops with pain. This disease is known as Vatakundalika.

Charak samhitas explains as:-

हिपरिर्त्तुं भिन्दिपरिर्त्तुं गङ्ङि गिरासिमुङ्ङितां च
 ङ्ङि गितं दनाक्लीडं नातिक्लृप्तसर्निताहिं नाडिकृपीफुड्डिडचय39द्यद्य
 ङ्ङि हि नोपुद्रसपिं गरिं पुचिर्चिर्त्तुं ननिर्त्तुं¹सद्रिं च
 पङ्ङि नद्रेतां उड्डिदिनर्त्तुं गिरं नपिर्त्तुं पडिकृपीफुड्डिडुपिर्त्तुं चय40द्यद्य
 (cÉ /IxÉ /9/44,45)

Because of the obstruction in the urinary passage, the vitiated vayu moves upwards, and afflicts the bladder as well as urinary channel as a result of which urination takes place in broken, curved and spiral manner. This ailment is called Vatakundalika.

It is characterized by morbidities of urinary tract like stiffness, breaking pain, heaviness, twisting, excruciation pain and retention of urine as well as feces.

Acharya Vagbhata explained as :-

दनाक्लीडं डकृपीफुड्डिडुपिर्त्तुं वरिपरिर्त्तुं पङ्ङि नद्रेतारिं इत्सो
 दिन्निर्त्तुं चिर्त्तुं हिं गरिं रुचिं²ो¹दिन्निर्त्तुं
 ङ्ङि उरिर्निर्गामं दनाक्लीडं हर्त्तुं चिर्त्तुं उपगं मसिर्त्तुं
 नापिडिकृपीफुड्डिडुपिर्त्तुं
 (A.WØú.iiÉ.9/25)

Vata aggravated and moving in a circular way in the bladder, causes sever pain, circular movemet of urine inside the bladder itself, obstruction to the flow and heaviness of the bladder, urine is released out little accompanied with elimination of faeces. This disease is called as vatakundalika.

In madhavanidan also the topic as vatakundalika explained as

नद्रेतां हि न शीर्षिणां नातिक्लृप्तवर्त्तुं गपिर्त्तुं गर्निर्त्तुं च
 ङ्ङि हि नद्रेतां बिन्दिपरिर्त्तुं दनाक्लीडं डकृपीफुड्डिडुपिर्त्तुं चय2द्यद्य
 ङ्ङि उरिर्निर्गामं गामं गुरुदिनपिर्त्तुं च
 नापिडिकृपीफुड्डिडुपिर्त्तुं पकिं नताहिं दनापिर्त्तुं गकिं चय3द्यद्य
 ङ्ङि हसपिं कुं दिर्त्तुं चय2ए3द्य

Indulgence in dry food, suppression of natural urges etc. causing

Aggravation of vata inside the urinary bladder begins to move inside the urinary bladder along with urine in a circular manner and manifest vatakundalika. Patient passes urine often in small quantity associated with pain is known as vatakundalika which is difficult to treat.

Lakshanas of vatakundalika

The overall lakshanas explained by acharyas are as follows

1. Tivra vyatha:- (sever pain)

It is explained that patient suffers from sever pain in abdomen

2. Gauravam:- (Heaviness)

The patient explains about the heaviness in abdomen and at bladder.

3. Mutravittasang:- (urine and stool passes together.)

Patient complains of urine and stool passes together.

4. Srujedaalpaalpamathwa:- (micturition in small quantity)

Patient complains of micturition in small quantity

5. Sarujaskam Shaneeshanee:- (dribblingmicturition)

Patient complains of dropping of micturition

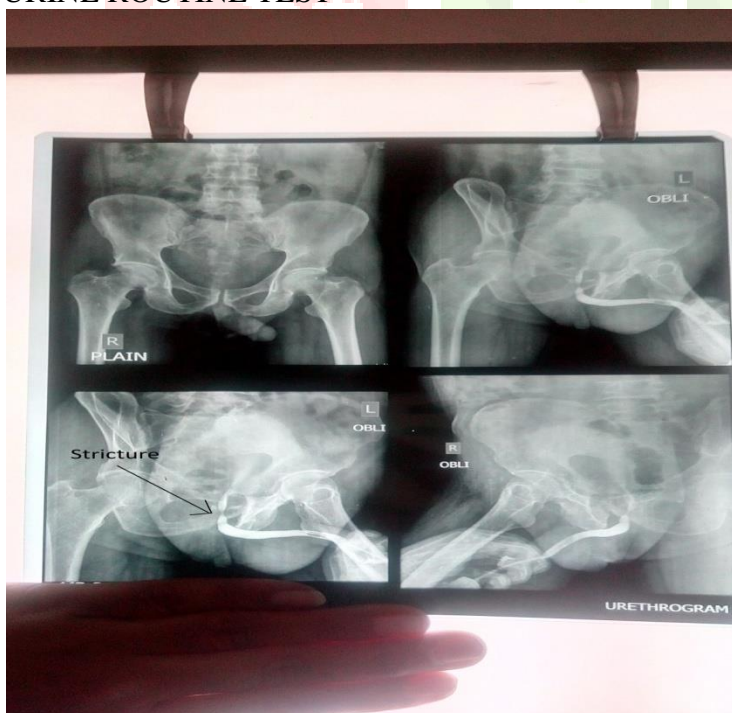
6. Mutravihanti sasatambha:- (Retention of urine)

Patient complains of retention of urine.

In allopathy science the urine formation and excretion is explained under the topic of excretory system. It is said that the toxins are formed whole over the body by breakdown of food and the waste is then collected in blood and travels to kidney so it can be purified and the filtration takes place. The important organs involved in urinary system are kidney, ureter, urinary bladder, and urethra.

The examination done for the study are:-

- 1) USG (Abd+pelvis) pre void and post void
- 2) X-RAY
- 3) UROFLOWMETRY
- 4) URINE ROUTINE TEST



MATERIAL AND METHODS

MATERIAL

- a) Compilation of all references of the term srota, mutravahasrota, mutraghata and vatakundalika are collected from Brihatrayi, Laghutrayi & classical ayurvedic text & other literature was done.
- b) For present study 30 patients of vatakundalika were taken.
- c) Case report form was prepared by the symptoms explained in samhitas & consent paper were prepared.
- d) Modern Investigations like uroflowmetry, USG, Xray urine routine test were done to find out structural involvement and changes in mutravahasrotas.

INCLUSION CRITERIA

1. Pre-diagnosed patients of vatakundalika were selected.
2. Age group:- 30 to 90 years.
3. Irrespective of Gender.
4. Irrespective of socioeconomic status.

EXCLUSION CRITERIA

1. Patients with Congenital changes in mutravahastrotas.
2. Patients with history of trauma on urinary tract and causing deformity after trauma.
3. Post Operative patients suffering from retention of urine.
4. Patients who are contra indicated to undergo Uroflometry.
5. Patient those are contra indicated to radiological examination.

METHODS

1. The literal word meaning of mutraghataand vatakundalika was referred from dictionaries and the context where the vatakundalika was mentioned in the classical texts was studied. The subject related to modern also reviewed. The subject was reviewed from various journals and articles.
2. In present study pre diagnosed 30 cases of vatakundalika weretaken according to inclusion criteria.
3. After appropriate counselling, written consents were taken from thepatients.A case record form which has the general details of patients and detailed information regarding the disease was prepared.
4. All the details of patients & disease were noted on case record form.
5. Assessment of sign and symptoms were done as mentioned in classical texts
6. After making note on the sign and symptoms, the patient undergone the investigation uroflowmetry, USG, XRay, urine routine test were done. Structural involvement and structural changes were noted.
7. Collection of data was done on basis of case study.
8. A master chart was prepared by making note on all the points mentioned in case record form.

ASSESSMENT CRITERIA

There are various lakshana (sign and symptoms) of vatakundalika explained in samhitas.

All the diagnosed patients of vatakundalika were assessed on the basis of sign and symptoms present in the patient, if lakshana present, it wasassessed as 1, & if lakshana are absent was assessed as 0.

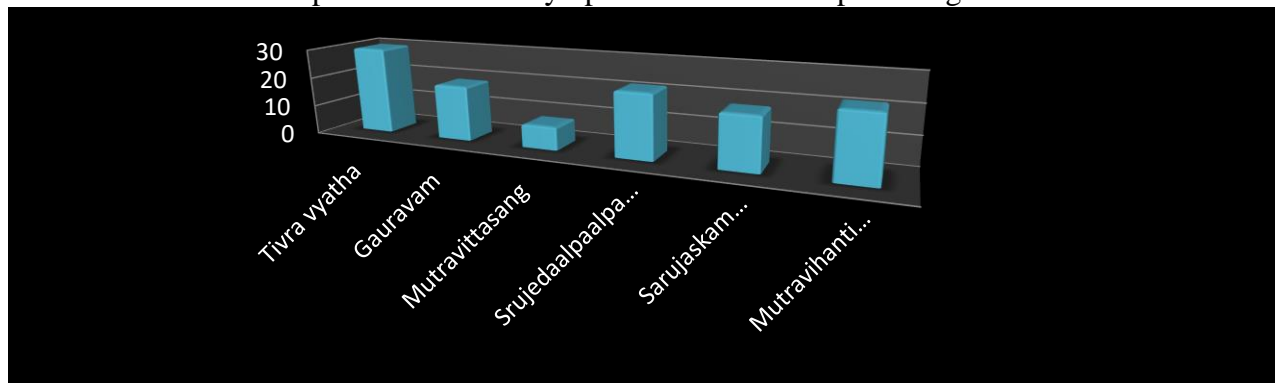
OBSERVATIONS

Total 30 diagnosed patients of vatakundalika were observed in this study. All 30 pre diagnosed patients were taken. The observations were recorded & necessary charts & graphs were made.

Table: Incidence of Lakshnani observed in vatakundalika.

Sr.No	Symptoms	Number of Patients	Percentage
1	Tivra vyatha:-(sever pain)	30	100%
2	Gauravam:-(Heaviness)	19	63.3%
3	Mutravittasang:-(urine and stool passes together.)	08	26.7%
4	Srujedaalpaalpamathwa:- (micturation in small quantity)	22	73.3%
5	Sarujaskam Shaneeshanee:-(dribbling micturation)	18	60%
6	Mutravihanti sasatambha:- (Retention of urine)	22	73.3%

Table: shows that no of patients with the symptoms and the total percentage



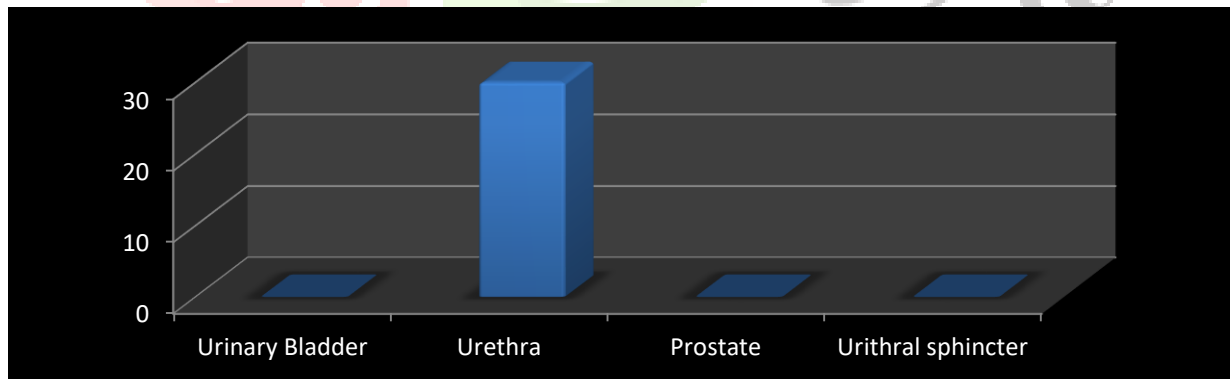
Graphical Presentation of symptoms and the number of patients

Structural Involvement

During the study it was observed that some of structures of mutravahasrotas are involved in vatakundalika vyadhi.

Sr. No	Visible Structures	Number of Patients	Percentage
1.	Urinary Bladder	0	0%
2.	Urethra	30	100%
3.	Prostate	0	0%
4.	Urethral Sphincter	0	0%

Table: Structures involved in vatakundalika.



Graphical Presentation of structural involvement

DISSCUSSION

Srota is a significant topic in Ayurveda. However, the counting of them varies among the acharayas, with the Charaksamhita explaining it as thirteen major srota and the Sushrutasamhita explaining it as eleven pairs of srota. Every one of them explains their mulasthanas differently.

One of the type of mutraghata vyadhi is vatakundalika explained by the acharyas. The detail explanation about clinical features, pathology and treatment of vatakundalika was mentioned, but the anatomy of the disease is not explained.

In the lakshana of vyadhi it says retention of urine is present, dribbling micturition is present but without any obstruction retention will not form. So to understand the structure involved of mutravasrota in vatakundalika vyadhi modern diagnostic examination was done.

The case record form was prepared by lakshana explained in ayurvedic texts and those lakshanas was observed in the patient to enroll in the study. They were advised for the investigation so to understand the structural involvement and the changes found.

The main examination done for the patients was USG, Xray, Uroflowmetry and urine routine test. From the lakshana explained in samhitas the patients were selected and enrolled. Then the patients were subjected to all the examination. We could find a bit fear and excitement on their faces when they were subjected to investigations. Before starting the procedure, detailed explanation regarding the procedure given to patients. For Xray examination mostly female patients were not cooperating so many female patients were not enrolled in this study. After the procedure the changes were noted and explained to the patients. The patients were guided for the further line of treatment according.

In the study the number of patients of the lakshana found for tivra vyatha 100%, the lakshana for gauravam 63.3%, the lakshana for mutravittasang was 26.7%, the lakshana for srujedaalpaalpamathwa 73.3%, the lakshana for sarujaskam shaneeshanee 60% and for the lakshana for mutravihanti sasatambha 73.3% were observed.

In the examination the structure involved and the anatomical changes were observed in Urethra was 100%, for prostate 0%, for urinary bladder 0% and sphincter was 0%. All the patients were having structural change present in urethra. No any other anatomical structure involvement was observed.

Regarding this topic, there is no previous work done. This work is helpful for physicians, to diagnose on the basis of modern parameter. These modern investigations precisely give the idea of affected structures in vatakundalika.

CONCLUSION

From this study it can be said that the structures are involved in vatakundalika

❖ Urethra

All the other structures remain normal.

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