A HISTORICAL REVIEW OF UROLOGY PRACTICE IN INDIA

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ABSTRACT

The urological diseases like Ashmari (Bladder stones), Vatasthila (Benign prostatic hypertrophy), Mutraghata (Retention of Urine), Mutrakrichra (Dysuria), Nirudhaprakas (Stricture Urethra), Medhraroga (Penile disorder) and Klibatwa (Sexual disorder) prevailed in ancient India from the Vedic era around 1000 BC was being practiced by the ancient practitioners Ayurveda. Subsequently in the Samhita period, the two trustworthy texts – Charak Samhita (Best in Medicine) and Susruta Samhita (Best in Surgery) elevated the art of medicine in India to extraordinary climax. Their explanation of the etiopathological hypothesis and the medical and surgical treatments of various urological disorders of unparallel creativity still remain valid to some extent in our modern understanding. The new generation of gifted Indian urologists should humbly venerate the legacy of the illustrious pioneers in urology.

The term “lithotomy position” is derived from the perineal approach to the bladder advocated first in this earth by the great Surgeon “Sushruta” around 1000 BC. Sushruta was practicing medical and surgical treatment of Ashmari (Urinary Bladder stone). He has narrated elaborately its etiopathology, symptomatology, consequences after failure of medical treatment and also advised precautionary measurement during operative procedure. He has also narrated details the surgical procedure i.e., position of the patient, fixation of the stone, mobilization the stone and expel the stone by Agravaktrayantra & postoperative treatment scientifically. The Operative procedure he has advocated, Suprapubic Cystolithotomy in case of male and Lateral perineal lithotomy in female patient as he was well aware regarding the anatomical differentiation between male and female.

Keywords: Urological diseases, India.

INTRODUCTION

Even though recognition of urology as a separate super specialty of general surgery is relatively recent, evidence of many diseases and some surgical procedures has been mentioned dating to ancient times i.e., in Samhitas and in Vedas. The medical & Surgical management of different diseases related to urology have been described in Nidansthan 3rd Chapter, Chikitsasthana 7th chapter, 58th and 59th Chapter of Uttar tantra of SushrutaSamhita and 26th chapter of Chikitsastana, 9th Chapter of Siddhis than of Charak Samhita, like Ashmari (Bladder stones), Mutrakhchra (Dysuria), Mutrasthila (Benign prostatic Hyper plasia), Mutraghat (Urinary retention), Medhraroga (Penile disorder) and Klibatwa (Erectile disorder) and also mentioned in Atharva Veda and in other Samhitas, the stallwarts of Ayurveda. Charak has mentioned the shape and surface characteristics of various calculi and its etiopathology and medical management. Various herbal medications are recommended for oral intake as well as to be anointed on the abdomen for accelerating urination. As Charak basically related to Medicine Group, he has been intended for surgical intervention by referring to a Surgeon at the time of failure of medicinal treatment or in unmanageable/complicated situations.

Aim of the Study

Susruta, the “Great Surgery Creator” since time immemorial practiced around 1000 BC in Varanasi, India.
We review his many contributions mentioned in his text “Sushruta Samhita” with special reference to the management of urological ailments [1-5].

MATERIALS AND METHODS

Information received from the available Hindi & English translation of SusrutaSamhita, the Stallworts of Ayurveda is critically analyzed and discussed its original verses with commentaries and studied on the point of historical perspectives with special reference to Urological ailments.

RESULTS

Susruta belonged to the period of 1000 BC. His knowledge of anatomy, physiology, pathology and therapeutic Medicinal & Surgical strategies were of incomparable brilliance. Susruta Samhita is indexed with five principal sections - 1) Sutra sthana ( primary principles) with 46 chapters, 2) Nidana Sthana (pathologogenesis of the diseases) - 16 chapters , 3) Sarirasthana (Anatomical concept) - 10 chapters 4) Chikitsasthahan (Treatment-Medicinal & surgical) - 34 chapters and 5) Kalpasthanam (Toxicology)-8 chapters.Sushruta has mentioned 101 blunt instruments and 20 Sharp instruments for various surgical operative works. He also recommends application of tubular instruments for urethral stricture. He has advocated gradual dilatation of urethra by means of tubes made of iron or wood, well smeared with ghee .He has advised the same tube for three consecutive days, then another of larger caliber for three days more and so on, till the canal be fully dilated. Susruta has advocated special treatment for penile sores that includes scarification, coring, excision & application of local astringents. He also described the best treatment for erectile disorder includes Vaji Karana (Rejuvenation) and also narrated various remedies for sexual hygiene. In Susruta Nidanasthana, he has mentioned details pathophysiology, clinical manifestation & classification of Ashmari (urinary calculus disease). In the chapter 7 of Chikitsasthahan he has mentioned initial medical management with diet, fluids, alkali and bladder instillations. He has narrated details the surgical management of Vesicle calculus as follows:

i) Indication: Surgical therapy is indicated if the medical treatment fails, other condition like more in chronicity, bigger the stone and blocks the bladder neck causing acute retention. Susrruta was also aware against the serious consequences like the death of the patient during the surgical removal of the stone. So before performing operation surgeon should explain the graveness of the disease and permission should be accorded. Again he has further explained that though operative interference may lead to serious consequence but if the patient will not be operated patient will ultimately die & chances are there for survival of the patient by the operation. Consent should be taken from the Authority [6,7].

According to Sushruta operative procedure should be performed in three steps- PoorvaKarma (Pre-operative measures), Pradhan karma (Operative measures), Paschat karma (Post-operative works) [8].

ii) Poorva Karma- Patient should take Sneha pan(oil),Medicated oils applied over the body and moderate sweating is induced, later his system be cleaned by Vaman and Virechan. Then he would be on light diet. After psychological make up by prayer to God and some other mantras, patient is to be shifted to operation theatre.

Position of the patient-In the operation room the patient is placed in the lithotomy position with his arms and legs bent and tied and held in position by attendants over whose lap the patient lies. The buttocks are raised by placing a cotton pillow bellow the pelvic girdle. For illumination, patient (Buttock) should be positioned towards sun.

iii) Pradhan Karma- i)Mobilisation of the stone-Snehadrayya (oil) should be applied over the abdomen and pelvis and efforts should be made to mobilize the stone by applying pressure from left side of Nabhi (umbilicus) to downward with the help of fist.

a) Fixation of the stone- Stone should be fixed near to shevani (Perineal raphe) with the help of two fingers(Index and middle)putting inside the rectum preferably by the left hand[1,8].

b) Incision- Incision should be made on left side 1 yava(width of a barley) away from shevani, the length of incision should be Ashmaripraman (length of incision should not exceed the length of Ashmari).Incision preferably should be made on left side but for technical convenience incision could be on right side.

c) Removal of the Stone-All efforts should be made to remove the stone(intact and complete)for which gentle pressure should be applied from rectal side by the finger and stone should be held by Agravaktrayantra (Stone holding forcep).

d) Precaution-During the fixation of the stone, patient may go in a stage of shock & look like a dead person, if this happened then operation should be stopped.

iv) Paschat karma-After removing the stone, patient should lie down in a boat of worm water by which blood will not accumulated in the bladder. The bladder must be irrigated by the astringent decoction (Panchkshirikashay). Then he must be removed from the boat.

a) Wound dressing- Ghee and honey is applied over wound. After 10 days light snehan and swedan is given to the patient and wound should be irrigated by panchkshirikashay (an astringent).A herbal paste of lodha, Mulethi, Mazeethu and Punderu is applied over the wound or oily preparation of the drug can also be applied.

b) Diet- Rice and ghee is given for three days orally. Then medicated yavagu with ghee is given to the patient for another 3 days. After this, for 10 days he must take
guda (jaggery), rice, milk and for another 10 days slight acidic juice like juice of dadim and juice of meat given to him [9].

In females, uterus is situated behind the urinary bladder. Surgeon should avoid injury to garbhasaya (Uterus) otherwise urinary fistula will occur. So incision should be given Utsangavat (Suprapubic Cystotomy). Utsangavat literally means a shallow superficial incision. i.e., incision as it is desired for suprapubic cystotomy. Susruta also mentioned a very important precaution that bladder must be injured only once, counter injury should be avoided otherwise healing will not take place.

v) Complication- Impotency & extravassation of urine take place if cutting of Sukravahasrotas & mutravahaprasek occur respectively during surgical procedure. If there are granules or Sharkara in urethra, then by incision it should be removed. Avoid sexual intercourse, riding horse and other heavy exercise at least for 1 year.

DISCUSSION

Beside this urological contribution, other crucial contributions of Susruta’s surgical inventory is the surgery of nasal reconstruction or rhinoplasty, pedicle flap grafting (called as Indian grafting), laparotomy, repair of intestinal injuries, surgery for Intestinal Obstruction, Intestinal perforation, Obstructed Labour, Hernia, Hydrocele, Ascites., Anal fistula, fractures, Cataract couching etc. in particular Susruta has earned the glory of being the pioneer urologist of ancient times. Considering the above discussion on surgical concept advocated by the Great surgery creator in the era 1000 BC is really an unparallel contribution to the modern surgery. As Science is advancing day to day by the development of more sophisticated instrument, the approaches are different for resolving the difficulties of the human beings but the basic concept is remain same as it was practicing during the period of Sushruta i.e., 1000BC [4-8].

CONCLUSION

Through Sushruta’s lucid perceptive, highly structured teachings and practice of the art of surgery, and many urological ailments in particular Susruta has earned the glory of being the pioneer urologist of ancient times.

REFERENCES