



VASTI FOR CHD (CANINE HIP DYSPLASIA) IN ST.BERNARD DOG - A SINGLE CASE STUDY

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ABSTRACT

The concept of *vasti* as being highlighted for various virtues has a wide spectrum of practical applicability. A rational approach towards the indications of *vasti* holds *vatarogas* on a special note. There are many previously proved cases of *vasti* doing wonders in various sets of disorders. There are some disorders which are genetic and can be managed than being cured. Hip dysplasia is one such disorder in humans as well as quadrupeds.

The animal lovers have increased in the recent past, to be precise a few decades or so where there was an increase in taming of hybrid breeds as well. Dogs are said to be the most tamed pets. St. Bernard is said to be one of the giants of the population with an average height of 70-90 cms, average weight being between 65-120kgs. The lifespan is ranging between 8-10 years. As these canines (ST. Bernards) are giants among the population and grow faster, there is a risk of having pain, discomfort in running and walking. As an attempt to reduce the discomfort and pain with the support of classical treatises, a minimal dose of oil and ghee with *vatahara* drugs was administered per rectum. This paper also discusses about the conceptual credential of *prakrti* assessment of dogs. The advantage of *vasti* in quadrupeds is that the factor of gravity doesn't act against the *vastidravya* as the spine is transverse.

Keywords: *Vasti*, Rational, St. Bernards, Transverse spine.

INTRODUCTION: Canine Hip Dysplasia (CHD) is an abnormal development of the coxo-femoral joint characterized by subluxation or complete luxation of the femoral head in young animals. It is a common and potentially debilitating orthopedic disease in dogs¹. Most clinically, dysplastic young dogs with or without osteoarthritis have been reported to respond to conservative treatment. (Andrey et al 1995). This is the disease found in large dog breeds like Labrador, St. Bernard etc². This biomechanical disease can be diagnosed by history of stilted or abnormal gait that worsens with exercise, and causes difficulties in jumping or sitting. The diagnosis is made based on history, clinical signs, palpation of the hip joint and confirmed by

radiographs³. Although the aetiology of this condition is not fully understood, environmental influences such as obesity, injury at a young age, overexertion on hip joint or round ligament tear at a young age, repetitive motion on forming coxofemoral joint, and excess dietary calcium/vitamin D are said to play key roles. HD primarily affects medium-sized and large-breed of dogs and has high heritability of up to 95%⁴.

Two approaches of canine HD management has been described, which include conservative management and surgery. Conservative management is achieved by a combination of exercise restriction, weight control, analgesics, and physical therapies⁵. The objectives are to relieve

pain, stabilize the hip joint, improve mechanical joint function, and slow down the progression of the disease and to bring the dog to normal or nearly normal level of activity⁶. Surgery aims to prevent/limit the development of HD or reduce/eliminate pain through salvage. Surgical techniques that have been used with success include juvenile pubic symphysiodesis, pelvic osteotomy^{7,8}, pelvic ostectomy⁹, denervation of hip joint capsule, shelf arthroplasty¹⁰, inter-trochanteric femoral osteotomy, excision arthroplasty¹¹, and total hip replacement.

There are several references in the Indian ancient scientific literature quoting about veterinary treatment modalities. Shalihotra, who is considered as the father of veterinary science has mentioned that, the lifespan of a dog is 16 years in his Shalihotra samhita¹². Hasti Ayurveda is another ancient treatise which mentions that the jwara seen in dog is called Alarka¹³. In Charaka samhita, there is a mention of vasti as the prime therapy for animals¹⁴. General recipe for vasti in animals also was mentioned in Charaka samhita siddhi sthana¹⁵.

The "Prakrti" based assessment of individuals has been dealt in detail by acharyas in the ayurvedic treatises. This scale of assessment is also applicable to the sector of animals. The breeds of dogs have been classified here under to ease the practical approach and the suitable treatment modality could be designed. Identification of individuals based on their biotypes is known as prakriti assessment. For easy categorization of canines, they are divided into three types based on the doshas and their presentations as follows

VATA PETS

- Mental quickness
- Highly intelligent

- Quick to learn and grasp new knowledge, but also quick to forget
 - Slenderness; lightest of the three body types
 - Runs and walks quickly
 - Tendency toward cold paws, discomfort in cold climates
 - Excitable, lively, fun personality
 - Changeable moods
 - Irregular daily routine
 - Variable appetite and digestive efficiency
 - High energy in short bursts; tendency to tire easily and to overexert
 - Full of joy and enthusiasm when in balance
 - Respond to stress with fear, worry, and anxiety, especially when out of balance
 - Tendency to act on impulse
 - Often distracted easily
 - Generally have dry skin and dry fur
- Physiologically, the appetite and digestion are variable.

The production of urine is scanty and the faeces are dry, hard, and small in quantity.

Their sleep may be disturbed and they will sleep less than the other types.

Their paws are often cold.

Psychologically, they are characterized by short memories but quick mental understanding. They will understand something immediately, but will soon forget it.

They sometimes lack determination, tend toward mental instability, and are sensitive to tolerance, confidence, or boldness.

Vata pets are nervous, fearful at times, and afflicted by much anxiety.

PITTA PETS

- Medium physique, strong, well-built
- Sharp mind, good powers of concentration
- Focused
- Assertive, self-confident; aggressive, demanding, pushy when out of balance

- Competitive, enjoy challenge
- Strong digestion, strong appetite; get irritated if they have to miss or wait for a meal
- Like to be in command
- When under stress, *Pittas* become irritated and angry
- Uncomfortable in sun or hot weather; heat makes them very tired
- People may find them stubborn or pushy
- Generally good leadership ability, usually acts as leader of the pack
- Subject to mood swings, impatience, and anger
- Typical physical problems include rashes or inflammations of the skin, acne, boils, skin cancer, ulcers, heartburn, acid stomach, hot sensations in the stomach or intestines, insomnia, bloodshot or burning eyes and other vision problems, anemia, jaundice.
- These pets are of medium build, are slender, and their body frame may be delicate. They show a medium prominence of veins and muscle tendons. The bones are not as prominent as in the *Vata* pet. Muscle development is moderate. The fur is soft and warm. The eyeballs will be of medium prominence. The claws are softer. The shape of the nose is sharp.

Physiologically, these pets have a strong metabolism, good digestion and resulting strong appetites. The animal of *Pitta* constitution usually takes large quantities of food and liquid.

Their sleep is of medium duration but uninterrupted.

They produce a large volume of urine.

The body temperature may run slightly high, and their paws will tend to be warm.

Pitta pets do not tolerate sunlight or heat well.

KAPHA PETS

- Easygoing, relaxed, slow-paced
- Affectionate and loving, forgiving, compassionate, non-judgmental nature, stable and reliable; faithful
- Physically strong with a sturdy, heavier build
- Have the most energy of all constitutions, but it is steady and enduring, not explosive
- Slow moving and graceful
- Slower to learn, but never forgets; outstanding long-term memory
- Soft fur; tendency to have large “soft” eyes and are soft tempered
- Tend toward being overweight; may suffer from sluggish digestion
- More self-sufficient, need less outward stimulation than do the other types; have a mild, gentle, and essentially undemanding approach to life
- Excellent health, strong resistance to disease
- Calm, strive to maintain peace in their surroundings
- Not easily upset and can be a point of stability for others
- Tend to be possessive
- Don’t like cold, damp weather
- Physical problems include colds and congestion, respiratory problems including asthma and wheezing, hay fever, allergies, and atherosclerosis

Pets of *Kapha* constitution have well-developed bodies.

There is, however, a strong tendency for these individuals to carry excess weight.

Their chests are expanded and broad.

The veins and tendons of *Kapha* pets are not obvious because of their thick skin and their muscle development is good.

The bones are not prominent.

The fur is soft, lustrous, and oily, and skin texture is cold and pale.

The fur is thick, dark, soft, and wavy.

The eyes are dense, large, and attractive. Physiologically, *Kapha* pets have regular appetites.

Due to slow digestion, they tend to consume less food.

Stools are soft and may be pale in color, evacuation is slow.

Sleep is sound and prolonged.

There is a strong vital capacity evidenced by good stamina, and *Kapha* pets are generally healthy, happy and peaceful.¹⁶

Case presentation

3 year old male St. Bernard dog was presented with abnormal (bunny-hopping) gait, difficulty in jumping, reluctance to

climb stairs, exercise intolerance and tenderness at the muscle in the hind limbs. It was previously diagnosed to have hip dysplasia just as most of the big/ giant dogs. Thinness of muscle was observed which has been measured by venier callipers.

Plan of treatment

Vasti (Rectal administration of medicated liquids) with *yamaka sneha* i.e oil and ghee (The mixture of any 2 fats of the 4 main fats is called *yamaka*) given for 5 days in 6 consecutive months. The amount taken was 10 ml for 3 months later on 15 ml for 3 months.

Treatment details

Table 1. Treatment schedule details

Type of <i>Vasti</i>		QUANTITY	Duration	REMARKS
<i>Anuvasana Yamak sneha vasti</i>	1. <i>Brihat Chagalyadi Ghritam</i> (Ghee) 2. <i>Ksheera bala taila</i> (Oil)	10ml	5 DAYS for 6 consecutive months	After 5 days of administration in each cycle, the appetite was low. Hence it was limited to 5 days in each episodic cycle



Figure 1. St. Bernard With Hip Dysplasia

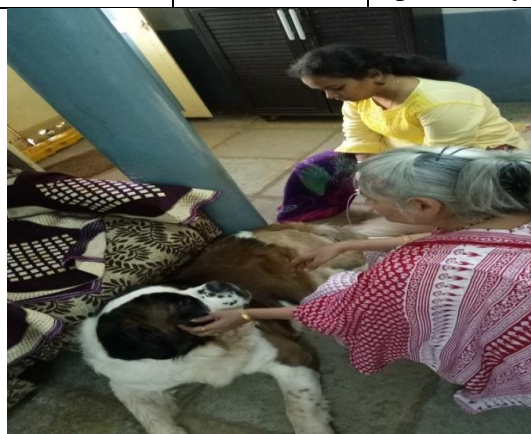


Figure 2. Administration Of Vasti To The St. Bernard

Parameters assessed before and after therapy

Table 2. The following parameters were taken into consideration based on self assessed grading scale. (reference of grading scale) 3- severe ; 2- moderate ; 1- mild ; 0- good.

<u>PARAMETER</u>	<u>BT</u>	<u>AT</u>
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TENDERNESS	3	0
ACTIVITY	3	2
WALKING TIME	3(HOPPING)	1
APETITTE	3	1

Improvement in the thick ness of the muscle mass of the dog was observed before and after therapy using vernier calipers as depicted in the following figure.

Figure 3. Muscle measurement



Table 3. Thickness of muscle BT and AT

Muscle thickness at the lower thigh	Main scale	Vernier scale	Total
Before Treatment	1.2	0.02	1.22 cm
After Treatment	4.5	0.0	4.5 cm

DISCUSSION

Rectal route of administration of medicine has been one of the most preferred route of drug administration in *Ayurveda*, popularly known as *Vasti karma*. Even Modern Pharmacology advocates many drugs in the form of rectal route, as the bioavailability of rectally administered drugs is more in comparison to the orally administered drugs, understandably. The former has the capacity to bypass the first pass metabolism of liver.

Rectal route can be of greater advantage for animals as they have some reluctance for intake of drugs because of their repulsive taste and odour. The Oil and ghee combination in *Ayurveda* is called as *Yamaka sneha*, which has a high nutritious value and known for its effect of muscle growth. Therefore the specific combination was chosen. The measurements of muscle thickness at the lower thigh were taken with the help of vernier callipers before and after the treatment which are mentioned in Table 3 and Figure 3.

CONCLUSION

The therapy called *vasti* which is an age old preventive and curative therapy has varied range of applications for all sects of living beings. The muscle growth has been significant in case of this breed as measured by vernier callipers. The walking time, altered gait have shown marked improvement with episodic administration of *vasti*. The aim of the study has been to extend the applicability of a popular *Ayurvedic* therapy modality *Vasti karma* for a quadruped, which was successful.

Hence it's wider applications have the roots creeping not only to good number of people, but also for the welfare of animals.

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