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Research Article

EVALUATION OF SIDDHA DIAGNOSTIC METHODS FOR *KARPAVIPPURUTHI* WITH THE AID OF CONVENTIONAL DIAGNOSTIC METHODS

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Article info

ABSTRACT

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KEYWORDS:

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The diagnosis of diseases comprise revealing its causes. In Siddha medical system testimony of causative elements is through the examination of pulse, urine, eves, study of voice, colour of body, tongue and the status of the digestive system. This system has labored out specific technique of urine exam which incorporates look at of its colour, odor, density, quantity and oil drop spreading pattern. So the study was aimed to decide the sensitivity and specificity of the Siddha diagnostic method for Karpavippuruthi. Applying Siddha system of diagnosis with inclusion and exclusion criteria, clinical study was carried out on persons having the disease *Karpavippuruthi*. The above stated diagnostic equipment along with wrist circummetric sign had been used for this study. Most patients had the wrist circumference of 8 finger units and a mere range of affected person's urine, drop of oil took the shape of slowly spread. Similarly, eight fold examinations found out maximum patients had pulse play with Vatha pitham. Bitter taste, pale coloured and coated tongue had been observed in tongue examination. Patient's urine samples had slight aromatic odor and normal density, normal *Enjal* and nearly absence of frothy. So it may be concluded that the subsequent Siddha tactics in amalgamation particularly Wrist circummetric sign, oil on urine sign and eight fold examinations differentiate the patients of *Karpavippuruthi* from the healthy volunteers.

INTRODUCTION

Siddha system of medicine is an incorporated a part of Indian system of medicine which could be very dynamic and solitary in its own right, through providing restoration of the body, mind and soul. Creation of the universe and the living beings is that everybody must live with devotion and right deeds; while the living beings devote sins; as a result they ought to be afflicted by distinctive ailments. One who protects the body, might be free from ailments, through keeping the three humours in the proper proportion. The three humours are *Vatha*, *Pitha* and *Kabha*. Three humors are principles of functional constitution of the body.

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The body which fail to keep the humours in the proper proportion is exposed to diseases. According to Siddha system, diagnosis is not simply naming the disease, but identification of the imbalance of Mukkutram. The Mukkutram imbalance is decided through deeply analyzing the physical, physiological, psychic and behavioral components of the patient. This system of diagnosis tells about the prognosis of the condition too. In the classical Siddha scripts different diagnostic procedures and symptoms of the various diseases are stated. The method of measuring Wrist circummetric sign and the interpretation of various measurements are clearly stated in the text of Padhinen Siddhar Naadi Nool. The procedure of spreading pattern of oil on urine and the interpretation of the consequences are clearly stated by Agathiyar and Theraiyar. Eight fold examinations, a form of systemic examination, consists of analyzing the pulsation, tongue, complexion, Voice, eye, examination of body for temperature and locating pain, stool and Urine. The current study was planned to assess the diagnostic tactics of Siddha system to diagnose

Karpavippuruthi with the useful resource of traditional scientific diagnostic tactics. Karpavirpuruthi is one of the frequently encountered gynaecological disease, with known prognosis and diagnosis was selected for the study. It is a clinical condition characterized by abdominal enlargement, pelvic pain and pressure, abnormal uterine bleeding, abdominal pain, white discharge, Emaciation, loss of appetite and excessive thirst ^[1]. The clinical symptoms of *Karpavirpuruthi* more or less correlate with the modern concepts of Endometrial cancer and Fibromyoma.^[4,5,6,7,8] The current study was planned to validate the diagnostic tactics of Siddha system to diagnose Karpavippuruthi with the useful resource of traditional scientific diagnostic tactics. The following tactics, taken for the study particularly Wrist circummetric sign, oil on urine sign and eightfold examinations were considered for this study ^[2]. The remedy in traditional system may be more valid if the disease is recognized by its own perspective. So the prevailing study was executed to validate the Siddha -diagnostic technique for Karpavippuruthi.

MATERIALS AND METHODS

Study Design

An observational type of study, single centric study.

Selection of Patient

Patients are randomly selected for this study with the assist of inclusion and exclusion criteria, from the outpatient of Noinaadal Department of Ayothidoss Pandithar hospital of National Institute of Siddha, Tambaram Sanatorium, and Chennai-47

Sample Size

Patients with uterine fibroid- 15 Patients with uterine cancer- 10

Healthy volunteers- 25

Total- 50

Criteria for Inclusion

An eighteen years above patients comes with selected diagnosis like mass in uterus found in USG. And with presence of two or more symptoms like abdominal enlargement, pelvic pain and pressure, abnormal bleeding, abdominal pain, white discharge, emaciation, loss of appetite, excessive thirst.

Criteria for Exclusion

Age below eighteen years, any major systemic illness and vulnerable group.

Study Enrolment

Patients had been very well instructed about the study and a written approval was received for this study. Demographic statistics, complaints and duration, symptoms, signs, laboratory parameters had been recorded in a case record form.

Wrist Circummetric Sign

To measure the wrist circumference in finger units, the patient was requested to hold his left hand's four fingers just below the right thumb, then the clinician measured the circumference of the right wrist just below four fingers of the left hand of the patient using a twine, then the twine was removed from the wrist and placed on a plain surface and the measurement of the twine was taken by the patient's finger. Total length of thread was counted in terms finger units.

Eightfold Examination

Pulse was examined on left wrist of women and felt for the strength of *Vatham, Pitham* and *Kapham.* The common characteristics of pulse like pulse appraisal, pulse character and pulse play had been assessed. *Vatham* is felt in the first finger, *Pitham* in the middle finger and *Kapham* below the ring finger. Tongue was tested for appearance, color, taste and salivary secretion. Patient's complexion and voice had been tested. Eyes had been tested for color, secretions and congestion. Body examination was accomplished to recognize the warmth of the body, sweating and presence of pain. Stool was tested for its consistency. Urine was tested for colouration, odour, frothiness, density, quantity and deposits.

Shape of Oil Drop on Urine

To keep uniformity, every patient was suggested to sleep early (earlier than 9 PM) with standard intake (two to three glasses) of water at some point of the dinner. Before sunrise, around 5 AM, patients had been requested to gather the midstream urine of the primary urination of the day in a clean and neat bottle. Urine therefore gathered was poured in a spherical extensive mouthed glass bowl (4-5 inches in diameter and 1.5 inch depth), stored on a flat surface and is permitted to settle. After ascertaining that the urine is stable and without wave or ripples or different have an impact on of the wind, the urine was tested in sun light at 6.30 AM. Sesame oil was then taken in a dropper and one drop of the oil was dropped over the surface of urine slowly (retaining a distance of 1mm from the surface of the urine to the lower end of the oil drop) without disturbing/touching the surface. It was then left for some minutes, and the oil drop spreading pattern on the urine was observed. The inferences were then recorded.

Ethical Issues

This study was approved by institutional ethical committee on NIS/IEC/9/2014-15/30–6.08.2015.

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Statistical Analysis

All gathered statistics may be entered in to computer, Results of the clinical parameters had been expressed as percentage and the *Neikuri* shape may be recorded as in keeping with literature. The shape affiliation with Normal healthy individuals / in patients with *Karpa virpuruthi* will be descriptively analysed and presented. The chi-square, Mantel-Hanzel chisquare, Proportion test will be used to determine the significance of a variable. Multivariate analysis – Factor analysis will also be achieved to decide the elements related to *Neikuri* shapes. Table 1 suggests the outcomes of wrist circummetric sign examination. In this study 15 cases of uterine fibroid 13.3% of cases were 9 $\frac{1}{4}$ finger breadth, 20% cases 9 $\frac{1}{2}$ finger breadth, each 33.3% cases were 10 and 11 finger breadth. In 10 cases of uterine cancer 50% of cases were 8 finger breadth, 10% cases 9 $\frac{1}{4}$ finger breadth, each 20% cases were 8 $\frac{1}{2}$ and 11 finger breadth. In 30 cases of healthy volunteers each 10% cases were 8, 9 $\frac{1}{2}$ & 11 finger breadth, each 23.3% cases were 8 $\frac{1}{2}$ & 9 $\frac{1}{4}$, 6.7% cases were 9 finger breadth and 16.7% cases were 10 finger breadth.

3

RESULTS

						-
Manikadainool	Uteri	ne Fibroid	Uteri	ne Cancer	No. of.	Percentage
(Virarkadai)	No. of.	Percentage	No. of.	Percentage	Health	
	cases		cases		Volunteers	
8	0	0	5	50	3	10
8 1⁄4	0	0	0	0	0	0
8 1⁄2	0	0	2	20	7	23.3
8 3⁄4	0	0	0	0	0	0
9	0	0	0	0	2	6.7
9 1⁄4	2	13.3	1	10	7	23.3
9 ¹ / ₂	3	20	0	0	3	10
9 ³ ⁄4	0	0	0	0	0	0
10	5	33.3	0	0	5	16.7
11	5	33.3	2	20	3	10

Table 1: Outcome of the Manikadai Nool Examination of Karpavippuruthi Patients and Healthy Volunteers

Table 2 suggests the outcomes of Naa in eight fold examination. Majority of cases, above 70% of uterine fibroid and healthy volunteers were normal condition in tongue appearance. In uterine cancer 50% cases had coated tongue and 50% had normal tongue.

Table 2: Outcome of the Naa Examination of Karpavippuruthi Patients and Healthy Volunteers

			Uterine Fibroid		ine Cancer	No. of.	Percentage
Naa		No. of. cases	Percentage	No. of. cases	Percentage	Healthy volunteers	
Thanmai	Maapadithal	2	13.3	5	50	4	13.3
	Vedippu	2	13.3	2	20	0	0
	Iyalbu	11	73.3	3	30	26	86.6
Niram	Karuppu	3	20	0	0	3	10
	Manjal	0	0	1	10	0	0
	Veluppu	5	33.3	4	40	0	0
	Iyalbu	7	46.7	5	50	27	90
Suvai	Каірри	0	0	4	40	2	6.7
	Pulippu	5	33.3	3	30	3	10
	Iyalbu	10	66.7	3	30	25	83.3
Vaineerooral	Kuraivu	0	0	3	30	1	3.3
	Iyalbu	15	100	7	70	29	96.7

Table 3 suggests appearance of *niram, mozhi, vizhi in* eight fold examination. Majority of uterine fibroid patients and healthy volunteers in the study had seen with normal eyes. In uterine cancer 40% of cases only had seen with normal eyes.

	Volunteers									
		Uterii	ne Fibroid	Uteri	ne Cancer	No. of.	Percentage			
Niram, M	Niram, Mozhi and Vizhi		Percentage	No. of.	Percentage	Healthy				
		cases		cases		volunteers				
Niram	Karuppu	11	73.3	9	90	22	73.3			
	Manjal	3	20	0	0	3	10			
	Veluppu	1	6.7	1	10	5	16.7			
Mozhi	Samaoli	12	80	6	60	24	80			
	Uratthaoli	2	13.3	1	10	2	6.7			
	Thazhnthaoli	1	6.7	3	30	4	13.3			
Vizhiyin	Karuppu	0	0	0	0	0	0			
Niram	Manjal	0	0	0	0	0	0			
	Sivappu	0	0	2	20	1	3.3			
	Veluppu	3	20	2	20	3	10			
	Iyalbu	12	80	6	60	26	86.7			
Vizhiyin	Kanneer	2	13.3	2	20	0	0			
Thanmai	KanErichchal	2	13.3	2	20	2	6.7			
	Peelaiseruthal	0	0	2	20	0	0			
	Iyalbu	11	73.3	4	40	28	93.3			

Table 3: Outcome of the Niram, Mozhi and Vizhi Examination of Karpavippuruthi Patients and HealthyVolunteers

Table 4 suggests end result of *Naadi* in eight fold examination. In this study 15 cases of uterine fibroid 73.3% cases were *Vanmai*, 26.7% cases were *Menmai* in *Naadi nithanam*, 6.7% were *Thannadai*, 40% were *Ilaithal*, 33.3% were *Kuthithal*, 20% were *Thullal* in *Naadi panbu*, 73.3% cases were *Vathapitham*, 13.3% cases were *Vathakabam*, each 6.7% cases were *Pithavatham* and *Kabavatham* in *Naadi nadai*. In 10 cases of uterine cancer 30% cases were *Vanmai*, 70% cases were *Menmai* in *Naadi nithanam*, 20% were *Thannadai*, 30% were *Ilaithal*, 30% were *Kuthithal*, 20% were *Thullal* in *Naadi panbu*, 50% cases were *Vathapitham*, 20% cases were *Pithavatham*, each 10% cases were *Vathakabam*, *Pithakabam* and *Kabavatham* in *Naadi nadai*. In 30 cases of healthy volunteers 60% cases were *Vanmai*, 40% cases were *Menmai* in *Naadi panbu*, 53.3% cases were *Vathapitham*, 16.7% cases were *Kabapitham*, 6.7% cases were *Kabapitham*, 3.3% cases were *Pithavatham* and *Kabavatham* in *Naadi nadai*.

Table 4: Outcome of the Naadi Examination of Karpavippuruthi Patients and Healthy Volunteers

	Uterin	ne fibroid	Uteri	Uterine cancer		Healthy volunteers	
	No	%	No	%	No	%	
	11	73.3	3	30	18	60	
	4	26.7	7	70	12	40	
ai	1	6.7	2	20	2	6.7	
	6	40	3	30	12	40	
l	5	33.3	3	30	8	26.7	
	3	20	2	20	8	26.7	
am	11	73.3	5	50	16	53.3	
im 🛛	2	13.3	1	10	5	16.7	
am 🛛	1	6.7	2	20	3	10	
m	0	0	1	10	1	3.3	
ım	1	6.7	1	10	3	10	
m	0	0	0	0	2	6.7	
a	am am 7 01 9 1	am 0		am 0 0 0	am 0 0 0 0	am 0 0 0 0 2	

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Table 5 suggests outcomes of *Sparisam* in eight fold examination. Majority of cases, 70% cases are having *Mitha veppam* in *Sparisam* condition, minority of cases are having *Migu veppam* and *Thatpam* in *Sparisam* condition and 10% of cases present in *Thoduvali thanmai*.

Mei kuri		Uterine Fibroid		Uterir	ne Cancer	No. of.	Percent		
		No. of. Cases	Percent age	No. of. Cases	Percentage	Healthy volunteer	age		
	Mitham	12	80	7	70	24	80		
Veppam	Migu	3	20	1	10	2	6.7		
	Thatpam	0	0	2	20	4	13.3		
	Iyalbu	11	73.3	7	70	27	90		

26.7

6.7

0

93.3

4

1

0

14

Athigam

Thoduvali

Udalvaratchi

Ivalbu

Table 5: Outcome of the Sparisam Examination of Karpavippuruthi Patients and Healthy Volunteers

Table 6: Outcome of the Malam and Moothiram Examination of Karpavippuruthi Patients and HealthyVolunteers

3

1

0

9

30

10

0

90

3

0

1

29

10

0

3.3

96.7

		Uterine	e fibroid	Uteri	ne cancer	No. of.	
	Malam		Percent age	No. of. cases	Percentage	healthy volunteers	Percentage
Niram	Кагирри	0	0	1	10	0	0
	Manjal	15	100	9	90	30	100
	Mala Sikkal	2	13.3	3	30	4	13.3
Thanmai	Sirutthal	0	0	3	30	2	6.7
	Iyalbu	13	86.7	4	40	26	86.6
			Moothird	ım- Neerku	iri		
Neer	Neer Manam	4	26.7	2	20	1	3.3
Thanmai	Neer Erichchal	2	13.3	2	20	3	10
	Straw yellow	2	13.3	0	0	12	40
Neer	Pale yellow	5	33.3	6	60	8	26.7
Niram	Colourless	8	53.3	3	30	10	33.3
	Orange colour	0	0	1	10	0	0
Nurai	Nil	9	60	7	70	16	53.3
	Present	6	40	3	30	14	46.7
Edai	Iyalbu	15	100	10	100	30	100
	Iyalbu	11	73.3	5	50	27	90
Enjal	Athigam	4	26.7	5	50	3	10

Table 6 suggests outcomes of *Malam* in eight fold examination. In the study majority of patients and volunteers had normal coloured stools. But minority of patients had *Sikkal* and *Siruthal* in all cases. In uterine fibroid majority of cases 53.3% had colourless urine, in uterine cancer 60% had pale yellow urine and in healthy volunteers 40% had straw colour urine. Almost all the cases and patients had mild aromatic smell and normal density, normal *Enjal* and almost absence of frothy urine.

Viyarvai

Thanmai

	Uterine fibroid		Uter	ine cancer	No. of.	Percent
Neikuri	No. of. cases	Percent age	No. of. cases	Percentage	healthy volunteers	age
Mellenaparaval	8	53.3	2	20	21	70
Muthu	3	20	3	30	6	20
Asathiyam	4	26.7	4	40	3	10
Aravilmothiram	0	0	1	10	0	0

Table 7: Outcome of the oil drop on urine Examination of Karpavippuruthi Patients and Healthy volunteers



Figure 1: Slowly spread pattern

Table 7 shows the results of shape of oil drop on urine examination. In this study 15 cases of uterine fibroid, 53.3% of cases had slowly spread (fig-1), 26.7% of cases had fast spread and 20% of cases had *Muthu* shape (fig-2). Among 10 cases uterine cancer, 20% of cases had slowly spread, 40% of cases had fast spread, 30% of cases had *Muthu* shape and 10% of cases had *Aravil mothiram* spread. Among 30 cases of healthy volunteers, 70% of cases had slowly spread, 10% of cases had Fast spread and 20% of cases had *Muthu* shape

DISCUSSION

There are many researches to be had for complete effectiveness of conventional medicinal drug with traditional remedy for specific disease entities. This study is new in its manner to validate conventional diagnostic tactics for specific disease entity. Wrist circummetric sign is one of the many tools used in Siddha practice. The progress of the disease is calculated by the number of fingers in decreasing order. Lower the value poorer the prognosis. Usually, the length of the twine begins with four fingers and ends with 11 fingers. In this study we observed significant number of patient's wrist circumference of 8 finger units. Siddha literatures state that 8 finger unit is the sign of abdominal discomfort, gastritis, anorexia and venereal diseases. Anorexia is one of the symptoms of *Karpavippuruthi*. As per Siddha text 7 ¹/₂ *Virarkadai* at *Manikadai* is indication for *Vippuruthi*^[2]. One study exhibits calculation of wrist's circumference with regards to height determines what kind of body



Figure 2: Pearl shape

frame one has. But since maximum human beings have combination of the three body types, wrist а measurements offer a rough estimate at best ^[9]. An another study said that the measurement of wrist circumference may also complement in assessing obesity in particular while other measures of obesity like BMI or waist circumference measurements are difficult or not feasible^[10]. In this study obesity is one of the major etiological causes of uterine fibroid. In case of shape of oil drop on urine, similar diagnostic tactics are available in Avurvedic system too particularly Thaila bindhu pariksha. Though shape of oil drop on urine appears to be a crude technique, it's far primarily based totally at the consistency, thickness, density of urine and by seeing the shape of a spread oil drop on the urine surface ^[11]. One study stated that the test was applied for different types of cancer patient and they concluded that the intensity of the disease increased or decreased, the direction and shape as well as size of dispersion of drop of sesame oil were changed ^[12]. There are numerous research said that the spreading pattern of oil is affected by the surface active molecules and other metabolites present in the urine. The interfacial tension between the surface active molecules and the oil may provide possibilities of various shapes, speed and extent of spread ^[13]. One recent study isolated some factors affecting formation and spreading nature of Neikuri. They finally concluded that the factors are tension of urine and oil, molecular weight, shape of the molecules and polarity of the molecules in the urine and oil, contents of the urine.

environmental pressure and rays of sun light [14]. Nowadays specific diseases or group of diseases taking common patho -physiological outcome are recognized through specific markers present in the biological fluids which may also determine the final results of the shape and direction of the oil drop, draws in addition research in this direction. As per the Siddha concept, the spreading nature of a single drop of oil on the surface of the urine suggests the imbalance of specific humour and prognosis of the disease. In this study, healthy volunteers and fibroid patients had Melana paraval spreading pattern of oil on urine and sieve pattern (Asathivam) in uterine cancer patients. Sieve pattern of spreading, in step with the scripts suggests the incurable nature of the disease ^[10]. Another study states that the sieve pattern of spreading suggests the disease of genetic origin ^[11]. Eight fold examinations include analyzing eight regions of body and bodily functions, all of which screen the location of balance and imbalance. In this study, significant numbers of patients were having soft rejuvenation pulsation and the pulse play of *Vathapitham*. The pulse examination of healthy volunteers found out to be in physiological state with respect to body nature, sex and age. Oral examination of the cancer patients found out bitter taste, pale coloured and coated tongue. Abnormal menstruation leads to excessive blood loss from the body. So patients get anemia with paler tongue. As per literature, bitter tongue is an indication of Piththa humour derangement. Bodily examination found out that the majority patients had Mitha veppam in Sparisam condition then nobody is having Udal varatchi and Thoduvali thanmai. Stool examination of affected person found out Mala sikkal and Siruththal present, but 40% had normal consistency. In urine examination majority of patients had mild aromatic smell and normal density, normal Enjal and nearly absence of frothy. Theraiyar, one of the famend authors of Siddha medicine defined urine examination and levels of health. He had defined about the colouration and consistency of the urine in vitiated humor and disease. He additionally emphasized the spreading nature of single drop of oil on urine ^[2,3]. In assessment to the traditional techniques, mean value based medical strategies are avoided in the constitution conventional based approach. Pathogenic disharmonies are labelled in phrases of dynamic conventional principles which cannot be at once equated with modern entities. Furthermore healthy states and disease are visible as a continuum in conventional Indian system. Diagnosis is assumed to be the definition of image with in a constant flow of physiological and pathophysiological elements. The primary understanding of conventional information accompanied through seek in to scientific linkage will

be more suitable for complementary medicine. So this system of diagnosis identifies the vicinity of vitiation of humours and giving the approaches for their correction.

CONCLUSION

It may be concluded that the Siddha diagnostic tactics (Wrist circummetric sign, shape of oil drop on urine and eight fold examinations) differentiates the patients of Karpa vippuruthi from the healthy volunteers. These cost effective tools not only assist in diagnosis but also suggests the prognosis of the disease and for reassuring the patient to be knowledgeable about the character of disease. There exists general criteria that diagnosis be made the use of traditional strategies and the conventional system of medicine is approached best for the remedy. Diagnosis in traditional system will show to be a cost effective, in-hand approach for common people. If research like this assist in validating the diagnosis in traditional systems and the anomaly springing up because of any variations may be minimized.

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