Research Article

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CLINICAL AND SCIENTIFIC EVALUATION OF AMA IN AMAVATA

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ABSTRACT

Ayurveda has its unique approach towards how we can live a healthy life. So, Ayurvedic Acharyas have mentioned certain preventive regimens namely Dinacharya, Ritucharya, Sadvritta, Achara rasayana, Matrashitiya, Navegannadharaniya etc., if person fails to adopt these dietary and lifestyle instructions, may suffer from many diseases. Improper dietetics and lifestyle ultimately leads to formation of ama in body and causes a lot of diseases. Ama is improperly digested state of food resulting due to result of mandagni. Ama is also termed as an antigen, much capable for inducing immunological reaction as in Amavata (Joint disorders). Ama also has potency to induce immunological reaction in a susceptible individual. So diagnosis of presence of ama in body is very necessary, especially in Amavata patient because Amavata is one of the most painful conditions caused by ama. Assessment of status of ama, agni before planning proper therapeutics is necessary. The present work mainly emphasize on clinical assessment of ama in Amavata. For this 100 cases of Amavata were registered and divided in three stages according to duration of disease and assessment of ama was done in all. Various subjective criteria were used to diagnose ama, which have been described in Ayurvedic classics. Ama was present in all the cases of Amavata but more dominancy of ama causes more severely appearances of amavata characters and out of 100 cases of Amavata, 86 cases were of Rheumatoid arthritis, 6 cases were of Systemic Lupus Erythematosus, 5 cases were of Reactive Arthritis and 3 cases were of Ankylosing Spondylitis.

Keywords: Ama, Amavata, RA, SLE, Ankylosing Spondylitis, Reactive arthritis.

INTRODUCTION

The word ama is derived from the ama dhatu with the suffix 'A'. It means improper or partially digested matter.¹ Due to poor strength of Kayagni, the improper adhya ahara dhatu (Rasa dhatu) is formed in amashaya, known as ama.^{2,9} Ama (Undigested and disintegrated substances) is of foul smell, excessive in quantity, slimy in nature, and causes stiffness of the whole body.³ Initially ama manifests at gastrointestinal level and later in advanced condition it reaches the systemic circulation by the help of vata. Acharya Chakrapani while commenting on Grahani Chikitsa has mentioned the existence of ama at different levels.⁴

Biophysical properties of ama

Ama is described as liquid in nature, heavy (high molecular weight), attaining different colors, etiological factor for almost all diseases, slimy, viscid, thready, sticky, manifesting various kinds of pain, yielding foul smell, having increased sourness, turbidity and obstructing various pathways (srotas) etc.^{5,9} Ama may be produced at various levels due to Jatharagni mandyata (hypo functioning of bio-digestive power) associated with dhatvagni daurbalya (sluggishness in functions of dhatvagni) and bhutagni mandyata (defect in the functions of bhutagni). Acharya Vagbhatta has described the diagnostic clinical criteria for assessment of ama. Acharya Charaka in Grahani roga chikitsa has described some clinical presentations of ama i.e. increased salivations, constipation, pain, burning sensation, anorexia and heaviness^{5,9}.

Aim of Study

Clinical assessment of ama in Amavata in three different stages.

MATERIALS AND METHODS

Plan of study

The present study entitled "Clinical and Scientific Evaluation of Ama with Special Reference to Amavata" was carried out in the OPDs of Vikriti Vigyan, Medicine (Rheumatology) and Kayachikitsa, Sir Sunderlal Hospital, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India. The cases were registered from September 2012 to December, 2013 from OPDs of Vikriti Vigyan, Rheumatology and Kayachikitsa. Selection of patients was done by using subjective criteria mentioned for the clinical diagnosis of Amavata. After the diagnosis of Amavata, assessment of ama was also carried out in three different stages. (Table 1-3)

Stage-1: Duration of disease less than 6 months

Stage-2: Duration of disease from > 6 months to one year

Stage-3: Duration of disease more than one year

Inclusion criteria

- Age ≥ 15 years
- Patients who fulfilled the diagnostic criteria of Amavata (Samanya lakshana and Pravridha lakshana)
- Both male and female patients.

Exclusion criteria

- Age below fifteen years.
- The patients, who did not fulfill Amavata diagnostic criteria.

Table 1: Diagnostic criteria of Samanya lakshana of Amavata

S.No.	Symptoms
1	Daurbalya (General weakness)
2	Gauravam hrdayasya (Heaviness in precordial region)
3	Trika sandhi praveshakau stabdhama (Stiffness in multiple joints)
4	Angamarda (Bodyache)
5	Aruchi (Anorexia)
6	Trishna (Thirst)
7	Alasya (Lethargy)
8	Gauravam (Heaviness)
9	Jvara (Fever)
10	Apaka (Indigestion)
11	Shunata anganam (Swelling) ⁶

Table 2: Specific or Pravridha lakshana of Amavata

S. No.	Symptom
1.	Hasta padashiro gulpha trika janu Uru sandhi sa rujam shotham (Pain and swelling in hand, feet, ankle, knee, hip and spinal joints)
2.	Rujyate atyartham (Excruciating pain)
3.	Vyavidha iva vrishchika (Nature of pain is like that of scorpion sting)
4.	Agni daurbalya (Hindered digestive mechanism)
5.	Praseka (Excessive salivation)
6.	Aruchi (Anorexia)
7.	Gauravam (Heaviness)
8.	Utsaharani (Lack of enthusiasm)
9.	Vairasya (Altered taste in the mouth)
10.	Daham (Burning sensation)
11.	Bahumutratam (Excessive urination)
12.	Kukshau kathinatham shulam (Hardness and pain in abdomen)
13.	Nidraviparyaya (Disturbed sleep)
14.	Trit (Thirst)
15.	Chardi (Nausea)
16.	Bhrama (Fainting)
17.	Murccha (Unconsciousness)
18.	Hrid graha (Stiffness in pericordium)
19.	Vidvibaddhatam (Constipation)
20.	Jadya (Stiffness)
21.	Antrakujanam (intestinal gurgling)
22.	Anaha (Distension in abdomen)

Table 3: Clinical diagnostic criteria of ama (Vagbhatta)

S.N	Symptoms
1.	Srotorodha (Obstruction in Srotas)
2.	Balabhransha (Reduction in strength or immunity)
3.	Gauravam (Heaviness in body and head)
4.	Anila mudhata (Disturbances in normal movements of Vata)
5.	Alasya (Lethargy)
6.	Apakti (Indigestion)
7.	Nisthiva (Excessive salivation)
8.	Malasanga (Obstruction of urine, stool and other waste product)
9.	Aruchi (Lack of desire towards food)
10.	Klama (Exhaustion) ⁸

Investigation profile

Patients who fulfilled diagnostic criteria of Amavata were subjected to undergo ancillary investigations to diagnose the type of arthritis/arthropathy as per Modern Medicine.

- Hematological parameters - Complete blood count (CBC), Erythrocyte sedimentation rate (ESR)
- Collagen profile including CRP (C -reactive protein), RA factor (Rheumatoid Factor), Anti ccp (Anti-cyclic citrullinated peptide), ANA (Anti Nuclear Antibody), Anti dsDNA (Anti double stranded DNA) tests and HLAB27 (Human Leukocyte Antigen).
- X-ray of the affected joints.
- Urine – Routine / microscopic examination

Statistical analysis

The collected data was transferred on master chart showing various items/variables in columns and subjects in rows. The analysis of data was done using statistical software SPSS version 16.0 and Chi² and Z test were applied.

Statistical Significance

p < 0.05 considered as statistically significant and p < 0.01 or p < 0.001 as statistically highly significant p > 0.05 not statistically significant.

On the basis of ancillary investigations 100 patients were divided into two groups:

Group-1 (n = 86) - Rheumatoid Arthritis

Group-2 (n = 14) - This group is further divided into 3 subgroups.

Sub group-1 (n = 6) –

Systemic Lupus Erythematosus (SLE)

Sub group -2 (n = 5) - Reactive arthritis (Re. A)

Sub group-3 (n = 3) - Ankylosing spondylitis (AS)

Note- To compare the incidence of symptoms between two groups, group-1 and group-2, Z test and χ^2 test was

applied. If Z is > 1.96 means $p < 0.05$ which shows significant results and vice-versa. If $Z > 2.58$ it means $p < 0.01$ which shows highly significant results.

Indication of significant or non- significant

When the result is significant it means there is significant difference between two groups for an individual symptom. That symptom may have high frequency either in group-1 or group-2. If the result is non-significant it means the possibility of a particular symptom for its presence or absence is same.

Table 4: Age wise distribution of the Amavata patients (n = 100)

S. No.	Age group	Total	Percentage
1.	15-24 years.	04	04 %
2.	25-34 years.	36	36 %
3.	35-44 years.	28	28 %
4.	45-54 years.	24	24 %
5.	55-64 years.	08	08 %

Table 5: Sex wise distribution in the two groups of Amavata (n = 100)

S. No.	Sex	Group 1 (n = 86) RA	Group 2 (n = 14)			Total
			Sub Group-1 SLE (n = 6)	Sub Group-2 Re. A (n = 5)	Sub Group-3 A.S (n = 3)	
1.	Male	14 (16 %)	0 (0 %)	02 (40 %)	02 (66 %)	18 (18 %)
2.	Female	72 (84 %)	06 (100 %)	03 (60 %)	01 (33 %)	82 (82 %)

Table 6: Marital Status wise distribution of Amavata patients (n = 100)

S. No.	Marital Status	Total (n = 100)	Percentage
1.	Married	97	97 %
2.	Unmarried	03	3 %

Table 7: Religion wise distribution in the registered cases of Amavata (n = 100)

S. No.	Religion	Total (n = 100)	Percentage
1.	Hindu	92	92 %
2.	Muslim	08	08 %

Table 8: Occupational status in the registered cases of Amavata (n = 100)

S. No.	Occupation	Total (n = 100)	Percentage
1.	Student	08	08 %
2.	Government employee	17	17 %
3.	House wife	54	54 %
5.	Farmer	09	09 %
6.	Self business	12	12 %

Table 9: Socio – economic status in the registered cases of Amavata (n = 100)

S. No.	Socio – economic Status	Total (n = 100)	Percentage
1.	Lower middle class (< Rs. 10,000/month)	26	26 %
2.	Middle class (Rs. 10,000-20,000/month)	48	48 %
3.	Upper middle class (>Rs. 20,000/month)	13	13 %
4.	Skilled working class	05	05 %
5.	Non working	08	08 %

Table 10: Family history of joint disease in closely relative in patients of Amavata (n = 100)

S. No.	Family history of joint disorder	Total number of cases	Percentage
1.	Rheumatoid Arthritis	35	35 %
2.	Other Joint disorders	10	10 %
3.	Absent (n = 30)	55	55 %

Table 11: The total duration of disease

S. No.	Duration	Total number of cases	Percentage
1.	Stage -1 (< 6 months)	15	15 %
2.	Stage -1 (>6 months upto 1 year)	10	10 %
3.	Stage -1 (> one year)	75	75 %

Table 12: The assessment of Prakriti of Amavata patients (n = 100)

S. No.	Group	Diagnosed disease	Vata Pitta Prakriti	Vata Kapha Prakriti	Pitta Kapha Prakriti
1.	Group 1	RA (n = 86)	25 (29 %)	54 (63 %)	7 (8 %)
2.	Group 2	Other than RA (n = 14)	3	8	3
3.	Sub- Group 1	SLE (n = 6)	2 (33 %)	3 (50 %)	1 (17 %)
4.	Sub- Group 2	Reactive arthritis (n = 5)	0 (0 %)	3 (60 %)	2 (40 %)
5.	Sub- Group 3	Ankylosing spondylitis (n = 3)	1 (33.33 %)	2 (66.66 %)	0 (0 %)

Table 13: The diagnostic criteria for the assessment of ama lakshana in stage 1 (n = 15)

S. No.	Symptoms	Group 1 (n = 13)	Group 2 (n = 2)		
		RA (n = 13)	Sub Group 1 (SLE) n = 0	Sub Group 2 (Re. A) n = 1	Sub Group 1 (A.S) n = 1
1.	Srotorodha (Obstruction in Srotas)	13 (100 %)	0 (0 %)	1 (100 %)	1 (100 %)
2.	Balabhransha (Reduction strength or immunity)	12 (92 %)	0 (0 %)	1 (100 %)	1 (100 %)
3.	Gauravam (Heaviness in body and head)	11 (85 %)	0 (0 %)	1 (100 %)	1 (100 %)
4.	Anila mudhata (Disturbances in normal movements of Vata)	13 (100 %)	0 (0 %)	1 (100 %)	1 (100 %)
5.	Alasya (Lethargy)	12 (92 %)	0 (0 %)	1 (100 %)	1 (100 %)
6.	Apakti (Indigestion)	12 (92 %)	0 (0 %)	1 (100 %)	0 (0 %)
7.	Nisthiva (Excessive salivation)	12 (92 %)	0 (0 %)	1 (100 %)	1 (100 %)
8.	Malasanga (Obstruction of urine and stool and other waste product)	5 (38 %)	0 (0 %)	0 (0 %)	1 (100 %)
9.	Aruchi (Lack of desire towards food)	13 (100 %)	0 (0 %)	1 (100 %)	1 (100 %)
10.	Klama (Exhaustion).	12 (92 %)	0 (0 %)	1 (100 %)	1 (100 %)

Table 14: The diagnostic criteria for the assessment of ama lakshana in stage 2 - (n = 10)

S. No.	Symptoms	Group 1 (n = 9)	Group 2 (n = 1)		
		RA (n = 9)	Sub Group 1 (SLE) n = 1	Sub Group 2 (Re. A) n = 0	Sub Group 1 (A.S) n = 0
1.	Srotorodha (Obstruction in Srotas)	8 (89 %)	1 (100 %)	0 (0 %)	0 (0 %)
2.	Balabhransha (Reduction strength or immunity)	9 (100 %)	1 (100 %)	0 (0 %)	0 (0 %)
3.	Gauravam (Heaviness in body and head)	9 (100 %)	1 (100 %)	0 (0 %)	0 (0 %)
4.	Anila mudhata (Disturbances in normal movements of Vata)	8 (89 %)	1 (100 %)	0 (0 %)	0 (0 %)
5.	Alasya (Lethargy)	9 (100 %)	1 (100 %)	0 (0 %)	0 (0 %)
6.	Apakti (Indigestion)	6 (67 %)	1 (100 %)	0 (0 %)	0 (0 %)
7.	Nisthiva (Excessive salivation)	6 (67 %)	1 (100 %)	0 (0 %)	0 (0 %)
8.	Malasanga (Obstruction of urine and stool and other waste product)	7 (78 %)	1 (100 %)	0 (0 %)	0 (0 %)
9.	Aruchi (Lack of desire towards food)	9 (100 %)	1 (100 %)	0 (0 %)	0 (0 %)
10.	Klama (Exhaustion).	8 (89 %)	1 (100 %)	0 (0 %)	0 (0 %)

Table 15: The diagnostic criteria for the assessment of ama lakshana in stage 3- (n = 75)

S. No.	Symptoms	Group -1 (n = 64)	Group-2 (n = 11)			Z-value and p-value
		RA (n = 64)	Sub Group 1 (SLE) n = 5	Sub Group 2 (Re. A) n = 4	Sub Group 1 (A.S) n = 2	
1.	Srotorodha (Obstruction in Srotas)	62 (97 %)	5 (100 %)	4 (100 %)	2 (100 %)	Z = 1.40, P > 0.05
2.	Balabhransha (Reduction strength or immunity)	62 (97 %)	5 (100 %)	4 (100 %)	2 (100 %)	Z = 1.40, P > 0.05
3.	Gauravam (Heaviness in body and head)	40 (63 %)	5 (100 %)	4 (100 %)	1 (50 %)	Z = 2.65, P < 0.01
4.	Anila mudhata (Disturbances in normal movements of Vata)	62 (97 %)	5 (100 %)	4 (100 %)	2 (100 %)	Z = 1.40, P > 0.05
5.	Alasya (Lethargy)	59 (92 %)	5 (100 %)	4 (100 %)	2 (100 %)	Z = 2.35, P < 0.05
6.	Apakti (Indigestion)	26 (41 %)	2 (40 %)	2 (50 %)	0 (0 %)	Z = 0.317, P > 0.05
7.	Nisthiva (Excessive salivation)	53 (83 %)	3 (60 %)	3 (75 %)	1 (50 %)	Z = 1.48, P > 0.05
8.	Malasanga (Obstruction of urine and stool and other waste product)	47 (73 %)	5 (100 %)	4 (100 %)	2 (100 %)	Z = 4.86, P < 0.01
9.	Aruchi (Lack of desire towards food)	60 (94 %)	5 (100 %)	4 (100 %)	2 (100 %)	Z = 2.02, P < 0.05
10.	Klama (Exhaustion).	58 (91 %)	5 (100 %)	4 (100 %)	2 (100 %)	Z = 2.51, P < 0.05

Table 16: Inter stage comparison of signs and symptoms of ama lakshana in three stages

S. No.	Symptoms	Stage 1 (n = 15)		Stage 2 (n = 10)		Stage 3 (n = 75)		Chi ² and p value
		Present	Absent	Present	Absent	Present	Absent	
1.	Srotorodha (Obstruction in Srotas)	15 (100 %)	0 (0 %)	9 (90 %)	1 (10 %)	73 (97 %)	2 (3 %)	Chi ² = 2.18 p = 0.337
2.	Balabhransha (Reduction strength or immunity)	14 (93 %)	1 (7 %)	10 (100 %)	0 (0 %)	73 (97 %)	2 (3 %)	Chi ² = 1.03 p = 0.597
3.	Gauravam (Heaviness in body and head)	13 (87 %)	2 (13 %)	10 (100 %)	0 (0 %)	50 (67 %)	25 (33 %)	Chi ² = 6.65 p = 0.036
4.	Anila mudhata (Disturbances in normal movements of Vata)	15 (100 %)	0 (0 %)	9 (90 %)	1 (10 %)	73 (97 %)	2 (3 %)	Chi ² = 1.33 p = 0.513
5.	Alasya (Lethargy)	14 (93 %)	1 (7 %)	10 (100 %)	0 (0 %)	70 (93 %)	5 (7 %)	Chi ² = 0.709 p = 0.701
6.	Apakti (Indigestion)	13 (87 %)	2 (13 %)	7 (70 %)	3 (30 %)	30 (40 %)	45 (60 %)	Chi ² = 12.7 p = 0.002
7.	Nisthiva (Excessive salivation)	14 (93 %)	1 (7 %)	7 (70 %)	3 (30 %)	60 (80 %)	15 (20 %)	Chi ² = 2.32 p = 0.314
8.	Malasanga (Obstruction of urine and stool and other waste product)	6 (40 %)	9 (60 %)	8 (80 %)	2 (20 %)	58 (77 %)	17 (23 %)	Chi ² = 8.99 p = 0.011
9.	Aruchi (Lack of desire towards food)	15 (100 %)	0 (0 %)	10 (100 %)	0 (0 %)	71 (95 %)	4 (5 %)	Chi ² = 1.39 p = 0.499
10.	Klama (Exhaustion)	14 (93 %)	1 (7 %)	9 (90 %)	1 (10 %)	69 (92 %)	6 (8 %)	Chi ² = 0.906 p = 0.956

OBSERVATION AND RESULTS

Assessment of ama was also carried out in three different stages.

**Subjective criteria
(Demographic profile)**

Patients selected for the study were in the range of 15-64 years. Out of 100 registered cases of Amavata, the maximum numbers of cases were observed in age group of 25 – 34 years i.e. 36 %, followed by 35 – 44 years i.e. 28 %, 45 – 54 years i.e. 24 %, 55 – 64 years i.e. 08 % and 15 – 24 years with minimum frequency i.e. 04 %. (Table 4)

It was observed in the study that out of the 100 registered cases, 18 were males and 82 were female patients. (Table 5)

Group- 1: Maximum patients were females i.e. 84 % followed by 16 % males.

Group- 2

Sub group-1 all the registered cases were females (100 %).

Sub group-2- 60 % cases were females followed by 40 % males.

Sub group-3- 66 % cases were males followed by 33 % females.

Amongst the 100 cases registered 97 % patients were married and 03 % patients were unmarried. (Table 6)

Amongst the 100 cases registered, 92 % cases were Hindus; while only 08 % were belonged to Muslims. (Table 7)

Out of 100 registered cases of Amavata, maximum number of patients belonged to House wife (54 %) category followed by government employee (17 %), self

business (12 %), Farmer (09 %) and student (08 %) respectively. (Table 8)

Out of 100 registered cases of Amavata maximum patients belonged to middle class group i.e. 48 % followed by 26 % of lower middle class group and 13 % cases belonged to upper middle class group, 08 % of non working class and 05 % cases belonged to skilled working class. (Table 9)

Out of 100 cases 35 % cases had the family history of Rheumatoid Arthritis, 10 % cases gave the history of other Joint disorders in family and 55 % cases gave the history of no joint disorder in family. (Table 10)

Table 11 reveals that 75 % cases belonged to more than 1 year duration followed by less than 6 months in 15 % cases and more than 6 months upto 1 year in 10 % respectively.

Group-1 (n = 86)

Maximum cases suffered from Amavata belonged to Vata Kapha Prakriti (63 %) followed by Vata Pitta Prakriti (29 %) with least number of frequency of Pitta Kapha Prakriti (8 %). (Table 12)

Group-2

Sub-group-1- Maximum cases suffered from Amavata belonged to Vata Kapha Prakriti (50 %) followed by Vata Pitta Prakriti (33 %) with least number of frequency of Pitta Kapha Prakriti (17 %).

Sub-group-2- Maximum cases suffered from Amavata belonged to Vata Kapha Prakriti (60 %) followed by Pitta Kapha Prakriti (40 %) with least number of frequency of Vata Pitta Prakriti (0 %).

Sub-group-3- Maximum cases suffered from Amavata belonged to Vata Kapha Prakriti (66 %) followed by Vata

Pitta Prakriti (33 %) with least number of frequency of Pitta Kapha Prakriti (0 %).

Group 1 (n = 13)

Table 13 reveals that Srotorodha, Apakti and Anila mudhata were present in all cases i.e. (100 %) followed by Balabhransha, Alasya, Nisthiva, Malasanga and Klama (92 %), Gaurava (85 %) and Aruchi (38 %) respectively.

Group 2 (n = 2)

Sub group-1 (n = 0)

No patient was belonged to this group

Sub group -2 (n = 1)

Table 13 reveals reveals that Srotorodha, Apakti and Anila mudhata, Balabhransha, Alasya, Nisthiva, Malasanga and Klama, Gaurava were present in all cases i.e. (100 %) absence of Aruchi (0 %) observed in these cases.

Sub group 3 (n = 1)

Table 13 reveals reveals that Srotorodha, Apakti and Anila mudhata, Balabhransha, Alasya, Malasanga, Aruchi, Klama and Gaurava were present in all cases i.e. (100 %) and absence of Nisthiva, (0 %) observed in these cases.

Group 1 (n = 9)

Table 14 reveals that Balabhransha, Apakti, Gaurava and Alasya were present in all cases i.e. (100 %) followed by Srotorodha, Anila mudhata and Klama (89 %), Aruchi (78 %), Nisthiva and Malasanga (67 %) respectively.

Group 2 (n = 1)

Sub group 1 (n = 1)

Table 14 reveals that Srotorodha, Apakti and Anila mudhata, Balabhransha, Alasya, Nisthiva, Malasanga and Klama, Gaurava and Aruchi were present in all cases i.e. (100 %).

Sub group 2

No patient was belonged to this group

Sub group 3

No patient was belonged to this group

Group 1 (n = 64)

Table 15 reveals that Srotorodha, Anila mudhata, Balabhransha were present in 97 % cases followed by Apakti (94 %), Alasya (92 %), Klama (91 %), Malasanga (83 %), Aruchi (73 %), Gaurava (63 %) and Nisthiva (41 %) respectively.

Group 2 (n = 11)

Sub group 1 (n = 5)

Table 15 reveals that Srotorodha, Anila mudhata, Balabhransha, Gaurava, Apakti, Alasya, Aruchi and Klama were present in all cases i.e. (100 %) followed by Malasanga (60 %) and Nisthiva (40 %) respectively.

Sub group 2 (n = 4)

Table 15 reveals that Srotorodha, Anila mudhata, Balabhransha, Gaurava, Apakti, Alasya, Aruchi and Klama were present in all cases i.e. (100 %) followed by Malasanga (75 %) and Nisthiva (50 %) respectively.

Sub group 3 (n = 2)

Table 15 reveals that Srotorodha, Anila mudhata, Balabhransha, Apakti, Alasya, Aruchi and Klama were present in all cases i.e. (100 %) followed by Gaurava and Malasanga (50 %) absence of Nisthiva observed in these cases.

Comparison between Group 1 and Group 2

Due to very less registered cases in stage -1 and stage-2 “Z” test could not be applied due to which comparison could not be done. But in stage -3 “Z” was applied and on comparison – table 15 shows that between the all symptoms of ama Apakti, Alasya, Aruchi and Klama shows significant result which meant that there is chances of presence of all these more or less features in Group-1 and Group 2. However, other symptoms of ama were observed equally in both groups.

Table 16 reveals that among the symptoms of ama in Amavata - Gaurava, Nisthiva and Aruchi shows the significant result it means that there is chances of presence of these symptoms more or less dominantly either in stage-1 or stage-2 or stage -3. However, other symptoms of ama were observed equally in all three stages of Amavata. Gauravam is more dominant symptom of ama in stage-2 (100 %) followed by stage-1 (87 %) and stage-3 (67 %) respectively. Nisthiva is more dominant symptom of ama in stage-1 (87 %) followed by stage-2 (70 %) and stage-3 (40 %) respectively. Aruchi is more dominant symptom of ama in stage-2 (80 %) followed by stage-3 (77 %) and stage-1 (40 %) respectively.

DISCUSSION

Ama is the outcome of improper digestion. Incomplete or partial digestion of food leads to ama formation causing srotorodha, balabhransha, gauravam, anila mudhata, alasya, ajirna, nisthiva, malasanga, aruchi and klama. Presence of clinical presentations of ama varies in three stages of Amavata, probably it may be due to variation of different proportions of doshic influence in the disease manifestation along with active role of ama in the pathogenesis of disease. Environmental, dietetic and other lifestyle modifications might be influencing the ama development. Hence a variation in the clinical presentations of ama in three stages of Amavata indicates pathologic changes. Variations of clinical presentations of ama may be due to relative dominance of vata, kapha, ama, environmental factors and the immune system individually or combined together influence the disease process in various stages of Amavata. Amavata results from the complex interactions between vata, kapha, ama, environmental factors and the immune system and all these factors substantially influence in the development of disease and accordingly symptoms and signs of disease manifest.

CONCLUSION

Thus the differences between the presences of ama characters more dominantly or less dominantly is due to variation of various proportions of doshic influence in the disease manifestation along with active role of ama. More dominancy of ama characters causes more severely appearances of amavata characters. On the other hand ama characters were equally present in SLE, Reactive arthritis, Ankylosing spondylitis as in Rheumatoid arthritis along with symptoms of amavata. So amavata is not a single diseases but it is a syndrome.

REFERENCES

1. Tara Nath Tarka Vachaspati: Vacaspatyam. 1st part. Varanasi: Chaukhamba Sanskrit Series Publisher; 1962. p. 792.
2. Prof Yadunandana Upadhyaya. Madhava Nidanam. Amavatanidanadhaya- 25/1-5. 1st part, Varanasi: Chaukhamba Publication Publisher; 2007. p. 509.
3. Ibidem Madhav Nidanam (2).
4. Pt Kashinath Shastri. Charak Samhita. Ghrahanichikitsadhyaya (15/73-74). Varanasi: Chaukhamba Bharti Academy Publisher; 2004. p. 464.
5. Neera Saini, PS Byadgi. Critical Understanding of Diagnostic Criteria for Ama. International Journal of Pharmaceutical and Phytopharmacological Research (eIJPPR) 2014; 3(4): 296-299.
6. Ibidem Madhav Nidanam (2), Amavatanidanamadhyaya, 25/4-6. p. 511.
7. Ibidem Madhav Nidanam (2), Amavatanidanamadhyaya, 25/7-10. p. 511.
8. Bhisagacharya Harisastri Paradakara Vaidya. Astangha Hridaya with Sarvanga Sundara and Ayurvedarasayana commentary. Sutra Sthana. Doshopakramaniyadhyaya- 13/23-24. 9th edition. Varanasi: Chaukhamba Orientalia Publisher; 2005. p. 216.
9. Byadgi PS. Parameswarappa's Ayurvediya Vikriti Vigyan and Roga Vigyan. Ama. 1st edition, Volume II. Varanasi: Chaukhamba Sanskrit Sansthan Publisher; 2007. p. 190-207.

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