


**Research Article**
**STUDIES ON AMLAPITTA W.S.R. TO RAKTADUSTI & RAKTAJA ROGA**
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**ABSTRACT**

*Amlapitta* is a disease where there is vitiation of *Pitta dosha* in general and *Amla Guna* of *Pitta* in specific. In the primary compendiums, the disease *Amlapitta* has not been mentioned separately. This disease was first described as a separate entity in *Madhav Nidan*, and thereafter in *Kashyap Samhita* and *Bhavprakash*. Although *Acharya Charak* has not mentioned this disease separately, the causative factor and clinical feature of *Raktadusti* and *Raktaja Roga* mentioned by him are very similar to that of *Amlapitta*. *Pitta* and *Rakta* are two identical elements of body. Due to the similarities in between *Pitta* and *Rakta*, the former afflicts more the later. In this study, the literary information regarding the similarities between *Raktadusti*, *Raktaja Roga* and *Amlapitta* have been verified through clinical study. A comparative discussion has been carried out between the causative factors and clinical features of *Raktadusti*, *Raktaja Roga* and *Amlapitta*. The study has been also carried out to evaluate the efficacy of *Amlaki* (*Emblica officinalis* Gaertn.), which is a well-known drug clinically effective on *Raktadusti* and *Raktaja Roga* due to its *Tikta*, *Madhura* and *Kashaya rasa*, *Madhur Vipaka* and *Sheeta Virya*. This subsequently helps to combat *Amlapitta*. Fresh juice of fruit pulp of *Amlaki* (*Emblica officinalis* Gaertn.) was administered in the selected 30 patients at a dose of 50 ml per day, at early morning and in empty stomach for a period of 21 days. After 21 days, effect of the stipulated drug was evaluated in 27 patients with 3 dropouts. The subjective and objective parameters have been evaluated before and after treatment. All the findings have been statistically analyzed using paired 't' test. The obtained results have been interpreted as -  $p < 0.05$  is significant &  $p < 0.001$  is highly significant. The results showed 'p' value  $< 0.001$  in most of the parameters (subjective and objective), which indicates that, the drug taken for the present study i.e. *Amalaki* is highly efficacious against *Raktadusti* & *Raktaja Roga* and subsequently very helpful to combat *Amlapitta*.

**KEYWORDS:** *Amlapitta*, *Pitta*, *Rakta*, *Raktadusti*, *Raktaja roga*.

**INTRODUCTION**

*Amlapitta* is an important disease in today's fast-growing society where there is much alteration of food habit and life style. Although it is one of the most commonly encountered disorders in clinics now a day, it is not categorically described in our principal compendiums. The categorical description of the disease *Amlpitta* is first available in *Madhav Nidan* and later it is found in *Kashyap Samhita* as well as *Bhavprakash*.<sup>[1-3]</sup> Being the foremost compendium, *Charak Samhita* has not given any detailed description about this disease. Many modern-day scholars have opined that, the features of *Pittaja Grahani* as described by *Acharya Charak* are very similar to *Amlapitta*.<sup>[4]</sup> But along with that, *Acharya Charak* has also given a detailed description of different disorders due to alteration of *Rakta Dhatu* (*Raktadusti*) along with the causative factors and their principle of management.<sup>[5]</sup> The interesting fact about these disorders caused by *Raktadusti* is that, majority of the disorders (mainly as symptoms and signs) are similar to the clinical features found in *Amlapitta*. Moreover, the causative factors of *Raktadusti* are similar to those of *Amlapitta*.<sup>[6,7]</sup> *Pitta* and *Rakta* are similar in nature and due to that; the aggravated *Pitta* afflicts *Rakta* more than other *Dhatus*. Study of *Amlapitta* in the context of *Raktadusti* and *Raktaja Roga* has not been done yet. So, in the above context, this study was carried

out to evaluate *Amlapitta* on the basis of *Raktadusti* and *Raktaja Roga*.

In the disease *Amlapitta* there is vitiation of *Amla Guna* of *Pitta* specifically "*Amlagunodrikta Pittamamla-pittam*".<sup>[8]</sup> *Pitta* and *Rakta* have very similarities in terms of *Gandha*, *Varna* & *Guna*.<sup>[9]</sup> *Acharya Vagbhat* has mentioned that, *Pitta dosha* remains as *Ashrayi* i.e. sheltered in *Rakta Dhatu* which acts as *Ashraya* i.e. shelter, due to their homologues character.<sup>[10]</sup> *Acharya Charak* has also mentioned *Pitta* as the *Mala* of *Rakta*.<sup>[11]</sup> According to *Madhav Nidan*, due intake of improper diet and regimen, the already accumulated *Pitta* during its natural accumulation season i.e. Rainy season, gets aggravated and causes *Amlapitta*, mostly in Autumn.<sup>[12]</sup> *Charak* has also stated that the *Rakta Dhatu* gets vitiated mainly during *Sharad Kaala* i.e. autumn season.<sup>[13]</sup> Besides these facts, there are plenty of similarities between the causative factors of *Raktadusti* (as mentioned by *Charak Samhita*) and *Amlapitta* (as mentioned by *Madhav Nidan* & *Kashyap Samhita*), which will be very helpful to assess *Amlapitta* in the line of *Raktadusti* & *Raktaja Roga*. Here we have considered *Raktadusti* & *Raktaja Roga* together because of the fact that, *Acharya Charak* has mentioned all the *Raktaja Roga* occurs due to vitiation of *Rakta* i.e. *Raktadusti* as consequence of *Nidansevan*.<sup>[14]</sup> *Acharya Charak* has also mentioned that all the *Raktaja Roga* occur afflicting the

Rakta Dhatu- 'Shonitashraya'.<sup>[15]</sup> Therefore presence of similar features like several *Raktaja Roga* in the disease *Amlapitta* validates *Raktadusti* as a pathological event in *Amlapitta*.

A comparative study of the causative factors of *Raktadusti* and *Amlapitta* are given below:

**Table 1: Comparative Study between causative factors of *Rakta Dusti* & *Amlapitta*<sup>[16] [17]</sup>**

Sl. No.	Causative Factor	<i>Raktadusti</i>	<i>Amlapitta</i>
01.	<i>Vidahi Dravya</i>	++	++
02.	<i>Dusta Dravya</i>	++	++
03.	<i>Amla Dravya</i>	++	++
04.	<i>Viruddhashan</i>	++	++
05.	<i>Adhyashan</i>	++	++
06.	<i>Ajeerna</i>	++	++
07.	<i>Ama</i>	--	++
08.	<i>Pishtanna</i>	--	++
09.	<i>Apakkva Madya</i>	++	++
10.	<i>Guru Bhojan</i>	++	++
11.	<i>Vishyandi Bhojan</i>	--	++
12.	<i>Vegdharan</i>	++	++
13.	<i>Atyushna Dravya</i>	++	++
14.	<i>Snigdha Dravya</i>	++	++
15.	<i>Ruksha Dravya</i>	++	++
16.	<i>Amla Dravya</i>	++	++
17.	<i>Drava Dravya</i>	++	++
18.	<i>Phanita, Ikshuvikar</i>	--	++
19.	<i>Kulattha</i>	++	++
20.	<i>Divaswapna</i>	++	++
21.	<i>Atisnana</i>	--	++
22.	<i>Avagahan</i>	--	++
23.	<i>Antara Udakpana</i>	--	++
24.	<i>Paryushita Bhojan</i>	++	++
25.	<i>Anupa Desha</i>	++	++
26.	<i>Sharad Kaala</i>	++	++

The pathological conditions which are mentioned as *Raktaja Roga* by *Acharya Charak* are combination of independent disease as well as sign and symptoms. Among them many identical features are also found in *Amlapitta*. Studies of these features help us to understand the character of *Amlapitta* and its evaluation in the line of *Raktadusti* & *Raktaja Roga*. A comparative study has been given below between the *Raktaja Roga* and the clinical features found in *Amlapitta*.

**Table 2 :Comparative Study between *Raktaja Roga* & features of *Amlapitta*<sup>[18]</sup>**

Sl. No.	Pathological Condition	<i>Raktaja Roga</i>	General Feature of <i>Amlapitta</i>
01.	<i>Avipaka</i>	++	++
02.	<i>Klama</i>	++	++
03.	<i>Utklesha</i>	++	++
04.	<i>Tikta Amla Udgar</i>	++	++
05.	<i>Gaurav</i>	++	++
06.	<i>Hrit Kantha Daha</i>	--	++
07.	<i>Aruchi</i>	++	++

Sl. No.	Pathological Condition	<i>Raktaja Roga</i>	Feature of <i>Urdhaga Amlapitta</i>
01.	<i>Tikta Amla Vami</i>	++	++
02.	<i>Udgara</i>	--	++
03.	<i>Hrit, Kantha, Kukshi Daha</i>	--	++
04.	<i>Shira Ruja</i>	++	++
05.	<i>Kara CharanaDaha</i>	--	++
06.	<i>Jwar</i>	++	++
07.	<i>Aruchi</i>	++	++
08.	<i>Kandu</i>	++	++
09.	<i>Mandal</i>	++	++
10.	<i>Peedaka</i>	++	++

Sl. No.	Pathological Condition	Raktaja Roga	Feature of Adhoga Amlapitta
01.	<i>Trishna</i>	++	++
02.	<i>Daha</i>	--	++
03.	<i>Murchha</i>	++	++
04.	<i>Bhrama, Moha</i>	++	++
05.	<i>Hrillas</i>	=	++
06.	<i>Kotha</i>	++	++
07.	<i>Analasaada</i>	++	++
08.	<i>Sweda</i>	++	++
09.	<i>Anga Peetatwakar</i>	+ (as <i>Vaivarna</i> )	++

In context of similarity between causative factors of *Rakta Dusti* and *Amlapitta* as well as similarity between *Raktaja Roga* and features of *Amlapitta*, the present study was carried out to evaluate.

1. Concept of *Raktadusti* & *Raktaja Roga*.
2. Evaluation of *Amlapitta* in the line of *Raktadusti* & *Raktaja Roga*.
3. To assess efficacy of the selected drug i.e. *Amlaki* (*Embllica officinalis* Gaertn), a well-known drug indicated for *Raktadusti*, in the management of *Amlapitta*.

### Materials and Methods

The literary information regarding the similarities between *Raktadusti*, *Raktaja Roga* and the causative factor and clinical features of *Amlapitta* were verified through clinical study. Assessment of homologous features of *Raktaja Roga* and *Amlapitta* were done on the basis of subjective and objective criteria. The study was also carried out to evaluate the efficacy of *Amlaki* (*Embllica officinalis* Gaertn.) as a *Raktadoshahara* drug in the management of *Amlapitta*. *Amlaki* is a well-known drug which is effective in *Raktadusti* and *Raktaja Roga*. This drug was administered in the patients included in the study to observe the improvement of subjective and objective criteria. The subjective and objective criteria were evaluated before and after treatment.

### Selection of Patients

30 patients were selected from OPD of IPGAE&R, at SVSP hospital irrespective of their sex, occupation and religion. The patients having the *Lakshan* of *Amlapitta* were selected for the study and subsequently the features of *Raktajaroga* were evaluated on the basis of subjective and objective parameters. Prior to carry out the study the informed patient consent form was duly signed by the patients.

### Inclusion Criteria

1. Patients should have the sign and symptoms of *Amlapitta*.
2. Patients above 20 years of age and below 50 years of age, irrespective of their occupation, sex and religion.
3. Patients who are willing to include themselves into the study.
4. Primarily detected *Amlapitta* patient, not taking any type of medication.
5. Primarily detected *Amlapitta* patient without any other chronic and acute disease.

### Exclusion Criteria

1. Patients below 20 years and above 50 years of age.
2. Patients who are not willing to include themselves into the study.

3. Diagnosed case of duodenal and gastric ulcer.
4. Patient with significant hepatic, renal, hematological, neurological or psychiatric disorders.
5. Patients of gastric carcinoma or Zollinger – Ellison syndrome were excluded from the study.

### Subjective Parameter

The subjective parameters were selected considering the identical features between *Raktadusti*, *Raktaja Roga* and *Amlapitta*, as mentioned in aforesaid texts of Ayurveda. These are:

1. *Avipak* (indigestion)
2. *Klama* (exhaustion without any exertion)
3. *Tikta Amla Udgara* (sour –bitter eructation)
4. *Gaurav* (heaviness)
5. *Aruchi* (loss of appetite)
6. *Trishna* (thirst)
7. *Sweda* (sweating)
8. *Shiraruja* (headache)
9. *Kandu* (itching)
10. *Agnisad* (diminished digestive capacity)

### Objective Parameter

The objective parameters were selected considering the pathological changes in blood i.e. *Rakta* in *Amlapitta*. These are:

1. Blood for TC, DC, Hb%, ESR
2. Blood for LFT.

### Adoption of Drug

*Amlaki* (*Embllica officinalis* Gaertn.) is a plant, which is clinically effective on *Raktadusti* & *Raktaja Roga* and subsequently combat *Amlapitta* by the virtue of its *Tikta*, *Madhura* and *Kashaya rasa*, *Madhur Vipaka* and *Sheeta Virya*.<sup>[19,20]</sup> Fresh juice of fruit pulp of *Amlaki* (*Embllica officinalis* Gaertn.) was administered in the selected patients at a dose of 50 ml per day, at early morning and in empty stomach for a period of 21 days. After 21 days, effect of the stipulated drug was evaluated.

### Pathyapathya

Patient was advised to avoid *Katu*, *Amla*, *Lavanarasa*, *Navanna*, *Viruddhaanna*, *Guru anna*, *Tailabhaksna*, *Tila*, *Masa*, *Kulattha*, *Avidugdha*, *Dadhi*, *Madya*, *Vega dharan*, *Pitta-prokopa* activity etc.<sup>[21]</sup>

### Study Protocol

#### Duration of study

The duration of the study was 21 days.

#### Assessment Criteria

Assessment was done on the basis of subjective and objective criteria before and after treatment. For the statistical evaluation each of the subjective parameters

have been arranged as per gradation<sup>[22]</sup> as mentioned below and evaluated thereafter.

### 1. Avipak

Grade	Feature
0	Absent
1	Occasional indigestion once or twice a week
2	3-5 times after both meals in a week
3	After every meal

### 2. Klama

Grade	Feature
0	Absent
1	Present but daily work schedule not disturbed
2	Present and daily work schedule impaired
3	Inability to perform daily work

### 3. Tikta Amla Udgara

Grade	Feature
0	Absent
1	Rare and not aggravated by spicy food
2	Intermittent and aggravated by spicy food
3	Continuous and aggravated by any type of food

### 4. Gaurav

Grade	Feature
0	No feeling of heaviness
1	Occasional heaviness in body but can perform normal work
2	Continuous heaviness which hampers normal work
3	Unable to do any work due to heaviness

### 5. Aruchi

Grade	Feature
0	Normal desire for food
1	Eating timely without much desire
2	Desire for food only after long intervals
3	No desire at all

### 6. Trishna

Grade	Feature
0	Absent
1	Present but daily work schedule not disturbed
2	Present and daily work schedule impaired
3	Inability to perform daily work

### 7. Sweda

Grade	Feature
0	Normal sweating according to climate and temperature
1	Sweating after heavy work and in humid climate
2	Sweating after moderate work, at comparatively low temperature
3	Sweating all over the year, at resting condition & impairs daily life

### 8. Shiraruja

Grade	Feature
0	Absent
1	Intermittent and relieved by <i>Pathyas</i>
2	Continuous, not relieved by <i>Pathyas</i> but relieved by medicines
3	Continuous, not relieved by rest or medicines

### 9. Kandu

Grade	Feature
0	Absent
1	Rarely with aggravation of other symptoms of <i>Amlapitta</i>
2	Intermittent with presence of cardinal symptoms of <i>Amlapitta</i>
3	Continuous with or without presence of symptoms of <i>Amlapitta</i>

### 10. Agnisad

Grade	Feature
0	Presence of appetite at the time of principle meal and no discomfort what so ever after taking any food
1	Feeling of heaviness after intake of heavy meal, for 3-4 hours with diminished appetite
2	Feeling of heaviness and discomfort after taking moderate to heavy meal even at the time of next principle meal with loss of appetite
3	Feeling of heaviness, bloating along with discomfort after taking any quantity of meal, remains throughout the day with complete loss of appetite

### Follow up of patients

All the patients were reviewed after 21 days from the date of administration of first dose. Any special information regarding the general health of the patient was recorded accordingly.

### Study sample

Total 30 patients of *Amlapitta* with features of *Rakta Dusti & Raktaja Roga* were included in the study.

### Statistical analysis

The information gathered on the basis of observation made about various parameters was subjected to statistical analysis in terms of Mean, Standard Deviation (SD) and Standard Error (SE). Paired 't' test was carried out at  $P < 0.05$  and  $P < 0.001$ . The obtained results were interpreted as  $-P < 0.05$  is significant &  $P < 0.001$  is highly significant.

### Observations and Results

Among the 30 patients total 3 patients were dropped out during study course. Hence complete clinical survey was done in 27 patients. Distribution of subjective parameters of *Raktadusti & Raktaja Roga* among the 27 patients of *Amlapitta* shows that, *Avipak* present in 27 patients (100%), *Klama* present in 25 patients (92.6%), *Tikta Amla Udgara* present in 27 patients (100%), *Gourav* present in 21 patient (77.8%), *Aruchi* present in 27 patient (100%), *Trisna* present in 24 patient (88.9%), *Sweda* present in 24 patient (88.9%), *Siraruja* present in 22 patient (81.5%), *Kandu* present in 18 patient (66.7%), *Agnisad* present in 27 patient (100%) [table no. 3]. Statistical analysis of subjective and objective parameters in 27 patients of *Amlapitta* before and after treatment shows that *Amlaki* has significant efficacy on both the subjective and objective parameters with 'p' value  $< 0.001$ . [table no. 4].

**Table 3 : Distribution of the subjective parameters in 27 patients of Amlapitta**

Sl. No.	Subjective Parameters	Number of Patient	Percentage
01.	<i>Avipak</i>	27	100%
02.	<i>Klama</i>	25	92.6%
03.	<i>Tikta Amla Udgara</i>	27	100%
04.	<i>Gaurav</i>	21	77.8%
05.	<i>Aruchi</i>	27	100%
06.	<i>Trishna</i>	24	88.9%
07.	<i>Sweda</i>	24	88.9%
08.	<i>Shiraruja</i>	22	81.5%
09.	<i>Kandu</i>	18	66.7%
10.	<i>Agnisad</i>	27	100%

**Table 4 : Showing the statistical analysis of subjective and objective parameters in 27 patients of Amlapitta before and after treatment**

Parameters	Mean BT	Mean AT	SD +/-	SE +/-	't' value	'p' value
<i>Avipak</i>	2.18	0.75	0.83	0.16	9.1	<0.001
<i>Klama</i>	1.71	0.90	1.35	0.26	3.1	<0.05
<i>Tikta Amla Udgara</i>	2.14	0.74	0.51	0.10	14.67	<0.001
<i>Gaurav</i>	1.35	0.75	1.12	0.21	2.78	<0.05
<i>Aruchi</i>	2.04	0.63	0.56	0.107	13.08	<0.001
<i>Trishna</i>	2.0	0.68	0.63	0.12	10.98	<0.001
<i>Sweda</i>	1.31	0.36	0.58	0.113	8.4	<0.001
<i>Shiraruja</i>	1.86	0.9	0.57	0.10	8.76	<0.001
<i>Kandu</i>	1.34	0.37	0.55	0.105	9.21	<0.001
<i>Agnisad</i>	2.09	0.72	0.54	0.104	11.66	<0.001
Hb%	11.6	11.8	0.35	0.068	2.96	<0.05
ESR	18.70	18.25	3.83	0.74	0.61	>0.05
SGOT	26.05	25.45	0.91	0.17	3.4	<0.05
SGPT	25.65	25.0	1.05	0.20	3.2	<0.05
Alkaline Phosphatase	90.20	88.80	4.20	0.81	1.703	>0.05

## DISCUSSION

*Pitta* and *Rakta* are two identical elements of body, among them *Rakta* is afflicted by the vitiated *Pitta* very often. *Amlapitta* is a disease where there is excessive vitiation of *Pitta* in general and *Amla Guna* of *Pitta* in specific. The causative factors which are responsible for *Pitta* vitiation also cause *Raktadusti*. Thus there are many common factors present in the causative factors of both *Raktadusti* & *Raktaja Roga* as well as *Amlapitta*. Considering this the identical causative factors are tabulated in the Table1. Apart from the similar causative factors, maintaining the principle of pathology both the *Raktaja Roga* (as sign and symptoms) and *Amlapitta* has identical features, which are tabulated in the Table 2. These findings validate that there is *Raktadusti* in *Raktaja Roga* as well as *Amlapitta*. So, *Amlapitta* can also be considered as one of the type of *Raktaja Roga*.

Table 3 shows that, most of the cases included under the present study were satisfying all the subjective criteria, which are identical features between *Raktadusti*, *Raktaja Roga* and *Amlapitta*. It signifies that, the textual understanding regarding *Raktaja Roga* and *Amlapitta* can be validated clinically.

Table 4 shows the statistical analysis before and after administration of the drug *Amlaki*. This table shows the 'p' value <0.001 in most of the parameters (subjective and objective), which indicates that, the drug taken for the present study is highly efficacious against *Raktadusti* & *Raktaja Roga* and subsequently against *Amlapitta*. *Amlaki*

acts against *Raktadusti* which in turn cause *Raktaja Roga*, by virtue of its *Tikta*, *Madhura* and *Kashaya Rasa*, *Madhur Vipaka* and *Sheeta Virya*. This subsequently helps to combat *Amlapitta* and reduce the manifestation of clinical features.

## CONCLUSION

The *Nidan* of *Raktadusti* has a definite role to cause *Amlapitta* part from *Raktaja Roga*. In all the patients of *Amlapitta*, *Raktadustilakshan* in form of *Raktaja Roga* are clinically present. The patients suffering from *Amlapitta* can be treated with the drugs responsible to arrest the *Raktadusti* and *Raktaja Roga* like *Amlaki*.

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**Cite this article as:**

Kaushik Porel, Sukalyan Ray. Studies on Amlapitta w.s.r. to Raktadusti & Raktaja roga. International Journal of Ayurveda and Pharma Research. 2017;5(7):74-79.

**Source of support: Nil, Conflict of interest: None Declared**

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