

A clinical study to evaluate the efficacy of *Amalaki Churna* in *Pandu Vyadhi* with special reference to Iron Deficiency Anaemia

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World Journal of Advanced Research and Reviews, 2022, 16(03), 1108–1111

Publication history: Received on 19 November 2022; revised on 26 December 2022; accepted on 29 December 2022

Article DOI: <https://doi.org/10.30574/wjarr.2022.16.3.1484>

Abstract

Iron Deficiency Anaemia (IDA) is the most common type of Anaemia overall, and is caused when the dietary intake or absorption of Iron is insufficient. According to National family health survey, India report Anaemia affects an estimated 50% of the Indian population.^[1] Rasayana Chikitsa is very beneficial to the patient of Pandu (IDA). In these diseases, the *Saarta* (essence) of all dhatus is lost hence the dhatus becomes *Nissari*. i.e., loss of qualitative physiological excellence, which ultimately results in *Oja-Kshaya*.^[2] Here 30 patients were selected randomly in the study and given *Amalaki Churna* in 3 gms/day. At the end of 30 days symptomatic improvement and increase in Hb% in Group were noticed. No significant therapy is there for chronic Anaemias in Modern science, which are often due to metabolic defect, so an attempt has been made to evaluate the efficacy of *Amalaki Churna* on Iron Deficiency Anaemia. It is reported that this drug has useful role in preventing Iron deficiency Anaemia due to metabolic defect.

Keywords: *Panduroga*; Iron Deficiency Anaemia; Anaemia; *Rasayana*; *Amalaki*

1. Introduction

Rakta has been considered as a key factor for the *Jeevana* (life), *Prinana* (provides nutrition to other dhatus), *Dharana* and *Poshana karma* of the body.^[3] It is seen that *Rakta* gets vitiated by *Doshas*, mainly by *Pitta dosha* as *Rakta* is *Pittavargiya* and disease like *Pandu* appears. *Pandu roga* is *Pitta pradhanavyadhi*.^[2] Due to *hetusevana*, *Pitta pradhanatridosha* gets vitiated and is circulated in the whole body causing *shithilata* in all dhatus which ultimately reduces *Rakta* and *Meda dhatu*. Decrease in *Sneha* and *Rakta Dhatu Rupa Oja guna*, *Varna*, *bala* are lost and thus there is *Pandu roga*.^[2] Drugs like *Haritaki*, *Amalaki*, *Pippali*, *Shilajatu*, *Makshika*, *Loha*, *Mandura*, *Abhraka* having *yogavahi*, *rasayana* properties provides better nourishment to the *Rasaraktadi dhatus*. Hence, *bala*, *sneha* and *Varna* of the body increase. While studying the *chikitsa* of *Pandu roga*, it is surprising to see that *kalpa* like *Yograjarasayana*, *Dhatri-avaleha*, *Shilajatuvatak*, *manduravatak*, *ghritas* is advised.^[2] In *Rasayanaadhyaya*, *Charaka* stated that *rasayanachikitsa* should be done in *Oja-kshaya* & *Dhatushithilata* stage where dhatus have lost its original form for qualitative production of dhatu. *Sushrutacharya* has mentioned the efficacy of *Amalakimadhu Yoga* in *Pandu Roga*.^[4] Further clinical study was carried out with *Amalaki-rasayana* in *Pandu vyadhi*.

Aims and objectives

The aim of study was to clinically assess *Pandu vyadhi* (IDA) and to evaluate the efficacy of '*Amalaki Churna*' in its management.

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2. Material and methods

A total of 30 patients of *Panduroga* (IDA) were randomly selected from outpatients and inpatients Department Kayachikitsa; Sumatibhai shah Ayurveda Mahavidyalaya in the year 2020-21. Out of 46 patients, 16 patients are discontinued during the treatment and 30 patients are treated completely.

2.1. Inclusion Criteria

- *Pandu roga* diagnosed according to subjective & objective parameters.
- Age group between 12-60 years irrespective of sex, religion, socio- economic status, marital status was selected.
- Blood sample showing hemoglobin percent more than 6gm/dl and less than 12 gm/dl.

2.2. Exclusion Criteria

- Pandu in age group below 12 years and above 60 years.
- Mrittikabhakshanjanya Pandu.
- Internal bleeding, Hemorrhoids.
- Pregnancy induced Pandu

2.3. Withdrawal Criteria

- If patients develops any adverse effect.
- If not responding to treatment and aggravation of symptoms.
- Patients refuse to continue treatment.

2.4. Clinical Study

- Lakshana of Pandu roga was noted in these people and also the causative factors were noted down.
- Deworming of the patient was done before commencement of the study with Tab. Albendazole 400mg stat
- 30 patients were given Amalaki Churna 3 gm/day in two divided doses with madhu (honey) for 1 month at Madhya *bhakta kala* (with and between the meals).

2.5. Informed Consent

Written, valid, informed consent of the patient was taken prior to the commencement of the clinical trial.

2.6. Follow Up

- Follow up of each patient was taken at the interval of 15 days or earlier if required at the time of clinical assessment.
- Hemogram was carried out before and at the end of study.

2.7. Drug Preparation

- 80– 100 mesh *Amalaki Churna* was bought from Ayurved Rasashala pharmacy (Pune).
- Authentication of *Amalaki Churna* was done prior to commencement of the clinical trial.
- Authenticated Madhu was used for the research work.
- 1.5 grams dose pack was given to patients and asked to prepare the same for 30 days from 100 grams pack of *Amalaki Churna*.

2.8. Drug Administration

This clinical work is aimed to study the efficacy of *Amalaki Churna* in *Pandu Roga*.

2.9. Null hypothesis

The difference between means of two sets of observations i.e. before and after treatment is same.

2.10. Alternate hypothesis

The difference between means of two sets of observations i.e. before and after treatment is different.

3. Observation and results

- Each patient is studied symptom wise. The size of the sample is 30 (n=30).
- The sample is selected randomly. Data is analyzed by applying paired-t test. Table value of t-test at 29 degree of freedom is 2.05.

4. Discussion

The most important presenting sign of *Pandu roga* is *Panduta* or Palloriness where lustre of the skin is lost. It is also the property of Oja as more and more *Ojakshaya*, *Raktakshaya* and *Pitta prakopa* occurs in the patients and *Hatprabha* or *Panduta* appears. *Amalaki*, being *Amla rasa pradhan* is a *swayonivardhandravya* of *Rakta dhatu*, which increases quality and quantity of *Rakta dhatu*. Regarding *Durbalata*, Result may be attributed to *shamana* of *Pitta Dosha* by *Amalaki Churna* greater extent and also due to *Rasayana* properties which are necessary for *Dhatu-kshayaja-vikaras* which removes *Dhatu Shaithilya*. In present study mostly Microcytic Anaemia was found, sizes of RBCs were smaller than the normal. And in IDA is type of Microcytic Anaemia. In Anaemia Iron deficiency is the most commonly found and main cause of Iron deficiency is improper Iron absorption in the gastrointestinal tract.

- Regarding the trial drug, *Amalaki* which is *Rasayan*, *Vayasthapana*, *Virechanopaga*, *Deepana*, *Pachana*, *Tridosahara* especially *Pittashamakadravya* acts on *Dhatu Shithilata*.^[6] Hence improvement in metabolism, ultimately leads to proper *Dhatu poshana*.
- *Amalaki* contains high amount of Vitamin C, which reduces ferric iron to ferrous iron which remains soluble even at neutral pH and is better absorbed. Even when the diet is poor in iron, Vitamin C supplement with each meal enhances iron absorption. Vitamin C taken in divided doses with each meal increase iron absorption to a greater extent.

5. Conclusion

Iron Deficiency Anaemia can be effectively compared with *Pandu roga* on the grounds of its similar signs and symptoms. *Amalaki Churna*, when given with honey which is best *Rasayana*. Iron is absorbed more easily in its ferrous form, and ferrous ions are formed in the Acid conditions of gastric contents. Hence, the formulations like *Amalaki Churna* with honey, which contains mainly *Amalaki* helps to develop that media which can improves the iron absorption at gastric level and also acts as a carminative, which reduces the Mal-metabolism of food and body tissues (*Rasa-Raktadi dhatu*).

Compliance with ethical standards

Acknowledgments

I express gratitude to the Department of Kayachikitsa and Hospital Authority for giving me this opportunity to study this particular research topic. Special thanks to Secretary of Maharashtra Arogya Mandal's Secretary, Hon'ble Mr. Anil Gujar, Hon'ble Principal Dr. Nilesh Phule and Faculty members Dr. Yogesh Kotangle, Dr. Vijayalaxmi Patil, Dr. Ritesh Damle, Dr. Kiran Ubhe for co-operating throughout the research study. Many thanks to Dr. Sadhana Rangnekar and to my colleagues, as we got to learn many new things while reviewing the research articles and our knowledge regarding the subject has been increased.

Statement of informed consent

Informed consent was taken from all patients.

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