

COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF RAJADRI MODAKA (RAJGIRA LADOO) IN NUTRITIONAL IRON-DEFICIENCY ANEMIA

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Abstract-

Aim & Objectives: - To see the effect of *Rajadrimodaka* in Nutritional Iron Deficiency Anemia & to evaluate the Hb levels in subjects with Rajadrimodak.

Materials & Methods: - Total of 40 subjects had been selected according to inclusion/exclusion criteria. Then **these** subjects were divided into 2 groups. One group had given *Rajadrimodaka* 30gm with Iron Folic Tablets for 60 days another group received only Iron Folic Tablets for 60days. All the subjective and objective parameters were estimated before and completion of the study i.e after 60 days.

Result: - In Group A (Trial group) significant change was seen in objective and subjective parameters & in Group B (control group) also significant changes were seen. But between the 2-group comparisons, the changes are not significant.

Keywords: Iron Deficiency Anemia, *Rajadri Modaka*.

INTRODUCTION:

Iron Deficiency Anemia is the most common type of anemia, and it occurs when your body doesn't have enough amount of mineral iron. Nutritional anemia has been defined by W.H.O as –“a condition in which the hemoglobin content of blood is lower than normal as a result of a deficiency of one or more essential nutrients, regardless of the cause of such deficiency”. According to the WHO, iron deficiency is the top nutritional disorder in the world. India is among the highest number of cases of anemia in the world, according to the NFHS (national family health survey) 2005-2006. I have selected “*RAJADRIMODAKA*” as a nutritional food supplement. It can improve the nutritional value of food and it will fulfill the deficiency of various essential minerals. Also, it is easily available, cost-effective, and palatable. Also “*Rajgira*” has a strengthening property (*Balya*) (*Bhavprakashnighantu, shakavarga. Modaka* contains “*Guda*”, which is again effective on *Pandu* (*Yoga ratnakar, purvardha*). Iron Deficiency Anemia is the most common form of malnutrition & the most widespread micronutrient deficiency in the leading cause of disease in girls and women in developing countries (World development report investing in health, 1993). The government of India has started many national health programs to prevent iron deficiency Anemia. National Iron plus initiative for anemia control among 6 months onward population by Government of India. The aim of the study is to see the effect of *Rajadrimodaka* in Nutritional Iron Deficiency Anemia

METHOD OF STUDY:

Sample size- 40

Type of study-

- Two Arm, Open-Labelled, Randomized, Controlled Prospective Clinical Study
- Parallel Study Design (Add on Study Design)

This part accounts for the material needed for research i.e, literature, sample size, type of study, criteria for selection of subject (inclusive & exclusive criteria), plan of study and instruments as well software needed for the research. In this study, the processing of *rajgira*, dosage, and its consumption in daily routine is elaborated. Process of blood collection for investigating CBC. Objective criteria (Hb,RBC,MCV,MCH,MCHC) is been focused. In short, counseling of the patients about the study was done and informed consent was taken from the patients. The study was approved by the Institutional ethical committee. The blood samples of 2ml were collected to estimate the Hb%. The patients were divided into two groups. One group received *Rajadrimodaka* 30gm with Iron Folic Tablets for 60 days another group received only Iron Folic Tablets for 60days. All the subjective and objective parameters were estimated before and completion of study i.e after 60 days. The changes on objective parameters of each group before and after supplementation were observed and statistically analyzed using paired T-test & Mann Whitney test was applied.

Inclusion criteria-

1. Subjects known case of Iron Deficiency Anemia
2. Subject of female sex age-18 to 50yrs
3. Subject with Hemoglobin between 7-10 gm/dl
4. Patients irrespective of religion, occupation.

Exclusion criteria-

1. Patient having occult blood positive on stool examination.
2. Any other type of anemia except Iron Deficiency Anemia.
3. Iron Deficiency Anemia with any associated severe complication.
4. Subjects less than 18yrs and above 50 yrs. of age.
5. Subjects with chronic illness like DM, HTN, TB, Leukemia, Bleeding Piles, and HIV, blood disorders, endocrinal disorders and pregnant women, menorrhagia.

ASSESSMENT CRITERIA: -

The improvement provided by the therapy was assessed on the basis of points given below:

- Clinical assessment
- Laboratory investigation.

RESULT:

According to subjective criteria, data was collected which were then arranged in tabular and graphics form and results were derived from statistical tests.

Paired —t-test was applied for both groups.

Mann Whitney tests were applied for comparison between two groups.

Wilcoxon test was applied for comparison between groups in subjective parameters.

According to statistical analysis in this study results were non-significant.

DISCUSSION

- Total 40 patients in 2 groups were taken and were assessed by both subjective and objective parameters.
- It was observed by statistical analysis that in Group A (Trial group) significant change was seen in objective and subjective parameters & in Group B (control group) also significant changes were seen.
- But between the 2-group comparison, the changes are not significant. As the iron content in *rajadri* and *gudais* less in amount as compared to the iron content in tab, Ferrium XT significant changes were not seen in group comparison.

- Also, it was found that for a further result the study duration must be increased for significant changes.
- As *Rajgira* is *Balya* and has *raktashodhana* properties, *Brimhana*(nourishing), *Sheetaveerya*,*ruchikara* it is used in the study as a food supplement and not as a Drug or for treatment.
- It is observed that *Rajadri* if taken regularly as a food supplement will act as a preventive measure for nutritional Iron deficiency anemia.
- The logical interpretation is done on the selection of the quantity of *rajagiraladoo* to be for 60 days, Anemic condition, and on results.
- It was concluded that for patients having less hemoglobin or to prevent IDA, *Rajadrimodaka* as a diet supplement is beneficial rather than having medicines only.
- At the end of this study while concluding *Rajadrimodaka* as an add-on treatment with oral iron supplementation can be beneficial in IDA , so in IDA with an iron supplement, diet supplementation having a rich source of iron can help to maintain Hb level and to prevent IDA.

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