A Clinical Study Of *Rohitkadya Churna* On *Yakritdaludar* W.S.R. To Hepatomegaly

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ABSTRACT:

Ayurveda the "science of life" or longevity is the holistic science. Human body is fundamentally composed of *Dosha*, *Dhatu* &*Mala*.Apart from the concept of *Dosha*, *Dhatu*, *Mala* there are so many other concept like *Strotas*, *Koshthanga*, *Ashya*, *AngaPratyanaga* etc. sthough all the organs have their own importance yet *Yakrit* (Liver) being the largest organ, has the point of consideration both anatomically and functionally. Liver disease has become a serious and challenging health issue for the medical system of India.

The present study deals with the review of *Yakrita* in terms of liver, *Yakritdalyudara* in terms of Hepatomegaly, probable causes and their inter relationship, *Samprati* formation of *Yakritdalyudara*. Present study deals with the efficacy of "*RohitakyadhaChurna*" on classical symptoms of *Yakritdalyudara* and on the commonly practised laboratory findings related with liver diseases.30Patients were randomly selected and divided into two groups, one treatment group and another control group. Duration of medication completed 30 days.

Key words: *Yakritdalyudara, RohitakyadhaChurna.*

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INTRODUCTION:

Ayurveda is the ancient science which basically deals with the maintenance of quality of life. It is composed of two words its self states its objective, "*Ayu*" means life and "*Veda*" means knowledge. The *Shastra* from we know about gaining & improving the *Ayu* is called *Ayurveda*. Human body is fundamentally composed of *Dosha*, *Dhatu* & *Mala*[1]. *Dosha* among the three as being functional entity has immense importance. For good health it is compulsory that all three *Doshas* function normally, due to any cause if *Doshas* do not work properly than our body become unhealthy.

Apart from the concept of *Dosha*, *Dhatu*, *Mala* there are so many other concept like *Strotas*, *Koshthanga*, *Ashya*, *AngaPratyanaga* etc. though all the organs have their own importance yet *Yakrit* (Liver) being the largest organ, has the point of consideration both anatomically and functionally. It performs lots of metabolic person and healthy status of liver is required for the health of an individual. *Yakrita* (liver) is a largest metabolic organ which helps in ridding off west materials, synthesis of various bioactive substances and also it is the site where most of the metabolic process takes place. So it is more prone to be affected specially in life style disorders & other metabolic disorders. Poor nutrition, various infections and secondary causes of other disease can impair the functions of liver and make it functionally sick. According to the latest WHO data published in 2017 liver disease deaths in India reached 259,749 or total 2.95% of total deaths. The ranking of India in deaths due to liver disease is 63, thus liver disease has become a serious and challenging

health issue for the medical system of India. Taking the all the above facts into consideration the selection of the study has been done. The present study deals with the review of *Yakrita* in terms of liver, *Yakritdalyudara* in terms of Hapatomegaly, probable causes and their inter relationship, *Samprati* formation of *Yakritdalyudara*[2]. The selection of the drug "*RohitakyadhaChurna*" was basically based on the classical reference and also on the consideration of the ingredients of the drug which are known to having great effect on liver, individually[3]. Present study deals with the efficacy of "*RohitakyadhaChurna*" on classical symptoms of *Yakritdalyudara* and on the commonly practised laboratory findings related with liver diseases.

AIMS & OBJECTIVE

1. To explore and establish clinical efficacy of *ROHITAKADHA CHURNA* on *Yakritdaludara* w.s.r. to Hepatomegaly .

Methodology:

Study was conducted out as follows:-

1. Literary Study:

There is critical review of relevant literature from *Ayurvedic* text books, previous research papers, thesis, different medical books & journals.

2. Clinical Study:

For the clinical trial 30 Patients had been selected from the OPD from Rajyavaidhya Premhankar*Ayurvedic*Chikitsalya M.M.M Government *Ayurvedic* college Ambamata Udaipur, Rajasthan.

3. Detailed Proforma:

Questionnaire was prepared to assess the *clinical efficacy of Rohitakadya Churna* and a special proforma was prepared on the basis of sign & symptoms of *Yakritdalyudara*.

4. Drug schedule:

Rohitkadya Churna was prepared in the Pharmacy of M.M.M Government Ayurvedic college Ambamata Udaipur, Rajsthan

5. Time period of Clinical trial:

Duration of medication completed 30 days and according to condition of patient.

6. Follow up:

Total two (every 15 day) follow ups were recorded during 30 days of treatment period.

7. *Pathyapathya*:

Patient had been made to follow *Pathyaapathya* while taking medication.

Selection of cases:

Patients having classical signs & symptoms of *Yakritdalyudara* were selected from O.P.D/M.M.M Government Ayurvedic College, Ambamata Udaipur Rajasthan after following the inclusion and exclusion criteria.

Selection of patients:

After fulfilling the criteria set in the form of inclusion and exclusion criteria, 30 Patients were randomly selected and divided into two groups, one treatment group and another control group.

Inclusion criteria:

1. Patients of age group of 15-70 having classical sign & symptoms of *Yakritdalyudara.*

2. Patients who are agree for the trial and fill the consent form.
3. Patients having hepatomegaly.
4. fatty liver

Exclusion criteria:

1. Patients having liver carcinoma.
2. Patient having liver cirrhosis.
3. Patient having acute and chronic hepatitis (A,B,C,D,)
4. Patient having ascitis.
5. Patient having portal hypertension.
6. Pregnant women.

ASSESSMENT CRITERIA

(1) **Subjective Criteria:**

Most of the signs and symptoms of *Yakritdaludara*are subjective in nature, to give the results objectively and for statistical analysis scoring system have been adopted. For subjective parameters following symptoms were assessed- *Daurbalya, Arochaka, Avipaka, , Varcho-mutragraha, Tamapravesha, Pipasa, Angamarda, Chardi, Murcha, Swasha, Mridujawara, Aanaha, Agninasha, Karshya, Aasayaverashya, Parvabedha,utkleshKosthavata, Kosthashula, Udaramarunvarna, Udaravivarnyam, Neel-harit-haridrarajimant[4].*

Scores were given to sign & symptoms of *Yakritdaludara* according to the severity of symptoms. All these symptoms assessment was done by using Symptom Rating Scale as following:

Absence of symptoms - 0

Mild degree of symptoms - 1

Moderate degree of symptoms- 2

Severe degree of symptoms - 3

The assessment was done before starting the treatment and every follow up i.e. 15 days and at the completion of the treatment. The symptoms score obtained before and after treatment, statistical analysis and percentage relief was taken to known the efficacy of therapy.

(2) Objective Criteria

The following laboratory parameters were used before and after the course of the therapy for the assessment of any changes produced during and after the present clinical research project-

- TLC

- DLC

- Hb

- Sr. Total Bilirubin

- Sr. Direct Bilirubin

- Sr. Indirect Bilirubin

- SGOT

- SGPT

- USG

Statistical-Methods:-

Various observations were made and results obtained were computed statistically to find out the significance of the values obtained and various conclusions were drawn accordingly. In Stat Graph Pad 3 software was used & for nonparametric data Wilcoxon matched-pairs signed ranked test is used. While for Parametric data Paired't' Test is used and results are calculated

OBSERVATION AND RESULTS:

Observation related with disease subjective criteria

1. *Arochaka*

S.No	Disease symptom	Group –A	Group-B	Total no. of patients	Percentage
1	*Arochaka*	14	14	28	93.33%

2.*Avipaka-*

S.No	Disease symptom	Group –A	Group-B	Total no. of patients	Percentage
1	*Avipaka*	12	14	26	86.66%

3.*Aanaha*

S.No	Disease symptom	Group –A	Group-B	Total no. of patients	Percentage
1	*Aanaha*	12	12	22	80%

4.*Aagninasha*

S.No	Disease symptom	Group –A	Group-B	Total no. of patients	Percentage
1	*Agninasha*	14	13	27	90%

5. *Kosthashula*

S.No	Disease symptom	Group –A	Group-B	Total no. of patients	Percentage
1	*Kosthashula*	4	5	9	30%

6. *Angamarda-*

S.No	Disease symptom	Group –A	Group-B	Total no. of patients	Percentage
1	*Aangamarda*	14	12	26	86.66%

Change In Subjective Parameters

Table No-1: Group –A

S.No	Subjective parameters	Mean		Difference	% changes	S.D (+/-)	S.E (+/-)	p-value	Result
		B.T	A.T						
1	*Arochaka*	2.200	0.8000	1.400	63.63%	0.6325	0.1633	0.0001	ES
2	*Avipaka*	2.400	0.9333	1.467	61.12%	0.5164	0.1333	0.0001	ES
3	*Aanaha*	2.000	0.9333	1.067	53.35%	0.2582	0.0666	0.0001	ES
4	*Agninasha*	2.533	1.000	1.533	60.52%	0.8338	0.2153	0.0002	ES
5	*Kosthshula*	0.3333	0.2000	0.1333	39.99%	0.5164	0.1333	0.1875	NS
6	*Angamarda*	2.267	0.7333	1.533	67.62%	0.5164	0.1333	0.0001	ES

Table No-2: Group –B

S.No	Subjective parameters	Mean		Difference	% changes	S.D (+/-)	S.E (+/-)	p-value	Result
		B.T	A.T						
1	*Arochaka*	1.667	1.533	0.1333	7.99%	0.3519	0.09085	0.2500	N.S
2	*Avipaka*	1.667	1.400	0.2667	15.99%	0.4577	0.1182	0.0625	N.S
3	*Aanaha*	1.600	1.333	0.2667	16.66%	0.5936	0.1533	0.0781	N.S
4	*Agninasha*	2.267	1.667	0.6000	26.46%	0.5071	0.1309	0.0020	N.S
5	*Kosthshula*	0.4667	0.3333	0.1333	28.56%	0.5164	0.1333	0.1875	N.S
6	*Angamarda*	1.533	0.8667	0.6667	43.48%	0.7237	0.1869	0.0039	N.S

Change in Objective Parameters :-Table No-3: Group –A

S.No	Objective parameters	Mean		Difference	% changes	S.D (+/-)	S.E (+/-)	t-value (+/-)	p-value	Result
		B.T	A.T							
1	Alkaline Phosphates	169.81	147.84	21.973	12.91%	54.327	14.027	1.566	0.1396	N.S
2	SGOT	57.753	36.693	21.060	36.46%	19.430	5.017	4.198	0.0009	E.S
3	SGPT	43.633	35.113	8.520	19.52%	13.260	3.424	2.488	0.0260	S
4	Hb%	13.159	13.485	-0.3267	2.48%	0.6584	0.1700	1.922	0.0752	N.S
5	ESR	12.333	11.267	1.067	8.65%	2.463	0.6360	1.677	0.1157	N.S
6	TLC	7502.7	7000	502.67	6.69%	1814.4	468.48	1.073	0.3014	N.S
7	Total Protein	6.808	7.011	-0.2033	2.98%	0.7232	0.1867	1.089	0.2946	N.S
8	Serum Albumin	4.313	4.490	-0.1773	4.11%	0.4820	0.1245	1.425	0.1761	N.S
9	Liver size	16.060	15.367	0.6933	4.31%	1.113	0.2874	2.412	0.0302	S
10	Total Bilirubin	0.8327	0.7213	0.1113	13.36%	0.3055	0.07888	1.411	0.1799	N.S
11	Direct Bilirubin	0.3213	0.3053	0.01600	4.97%	0.1047	0.02704	0.5917	0.5635	N.S
12	Indirect Bilirubin	0.5113	0.4160	0.09533	18.64%	0.3231	0.08341	1.143	0.2723	N.S

Table No-4: Group –B

S.No	Objective parameters	Mean		Difference	% changes	S.D (+/-)	S.E (+/-)	t-value (+/-)	p-value	Result
		B.T	A.T							
1	Alkaline Phosphate	156.53	156.53	-0.006667	0.004%	7.740	1.999	0.003336	0.0074	N.S
2	SGOT	39.853	36.667	3.187	0.469%	8.399	2.169	1.469	0.1638	N.S
3	SGPT	39.453	35.733	3.720	9.42%	7.678	1.982	1.877	0.0816	N.S
4	Hb%	12.836	12.907	-0.07067	0.55%	0.5793	0.1496	0.4725	0.6439	N.S
5	ESR	9.133	9.400	-0.2667	2.92%	1.223	0.3157	0.8446	0.4125	N.S
6	TLC	6606.7	6640.0	-33.333	0.50%	709.80	183.27	0.1819	0.8583	N.S
7	Total Protien	7.280	7.358	-0.07800	1.08%	0.6608	0.1706	0.4571	0.6546	N.S
8	Serum Albumin	4.509	4.515	-0.006667	0.14%	0.4176	0.1078	0.06184	0.9516	N.S
9	Liver size	14.728	14.453	0.2747	1.86%	0.6953	0.1795	1.530	0.1483	N.S
10	Total Bilirubin	0.7993	0.7600	0.03933	4.92%	0.1790	0.04622	0.8509	0.4091	N.S
11	Direct Bilirubin	0.3647	1.950	-1.585	434%	6.284	1.623	0.9770	0.3451	N.S
12	Indirect Bilirubin	0.4347	0.4600	-0.02533	5.8%	0.1670	0.04312	0.5876	0.5662	N.S

Table No-5: Effect on laboratory parameters

S.No	Laboratory parameters	Result-Group-A	Result Group-B
1	Hb%	Non-significant	Non-significant
2	TLC	Non-Significant	Non-Significant
3	Total protein	Non-Significant	Non-significant
4	S.albumin	Non-Significant	Non-Significant
5	S.bilrubin (direct)	Non-Significant	Non-Significant
6	SGOT	Extremely Significant	Non-significant
7	SGPT	Significant	Non-significant
8	S.alcaline phosphate	Significant	Non-Significant
9	Liver size	Significant	Non-significant

DISCUSSION:

To understand the therapeutic effects of the drug it is essential to know its pharmacodynamic properties. Entities like *Rasa*, *Guna*, *Virya* and *Vipaka* of any herb are supposed to perform all its functions. So these are subjects of major concern regarding the action performing capacity of the drug. The trial drug *Rohitakadya Churna* contains eight drugs namely *Rohitak*[5], *Yava-kshar, Kirattikta*[6], *Kutaki*[7], *Mustak*[8], *Navsadar, Ativisha*[9], *Shunthi*[10].Most of these drugs are having *Katu, Tikta, Kashaya-Rasa, Laghu, Rooksha-Guna*and *KatuVipaka, Ushna-Virya*.These are said to be *Kaphagna, Raktashodhak*[11]*, Shothahar*[12]*, Mutral, Anuloman*. On the basis of their pharmacodynamics it can be proposed that all drugs used in the preparation of compound are mostly

*KaphapittaShamaka*in property along with that some drugs, *Kirattikta* and *Ativisha,* have *Tridoshahara*[13] properties. Maximum drugs have *Agnivardhaka*properties and act on *Jatharagni*as well as *Dhatwagni*[14]. The possible explanatory theories supporting the probable mode of action of the polyherbal formulation- *Rohitakadya Churna* used for the present study. As the entire ingredient present in *Rohitakadya Churna* have some Probable pharmacological actions like Lipid peroxidation, Hypochloremia effect[15]. Hepatoprotective, Antioxidant, Choleretic effect. Hepato-curative, Antiviral, Regeneration of cell[16]. Anti-inflammatory, Hypocholesterolemia by which it can be concluded that *Rohitakadya Churna* is an effective formulation in management of*Yakritdalyudar* in term of Hepatomegaly[17].

CONCLUSION:

The study is found to present the association of *Mandagni* and Hepatomegaly (*Yakritdalyodar*) as maximum patients were having *Mandagni*. The data Suggest that Rohitakadya choorna is found effective in the cases of hepatomegaly in terms of reducing the sign and symptoms as there was marked relief in the Symptoms like *Arochaka ,Avipaka ,Aanaha,Agninasha* and *Angmarda*. It was also observed that there were marked improvement in the some bio chemical parameters like SGOT and SGPT. Though the study was performed on less no. of subjects and furhter the efficacy of *Rohitakadya Choorna* may be evaluated on large sample size.

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