



Cardio-Protective Formulations of Bhaishajya Ratnavali- A Literary Review

KEYWORDS

Cardiovascular disease, Hridya, Cardio-protective formulation, Hridaya roga, Bhaishajya Ratnavali

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ABSTRACT

Cardiovascular disease is one among the leading causes of mortality worldwide. The incidence of Cardiac disorders is increasing at an alarming rate in our country also, attributed largely to changing concepts of diet & lifestyle. Any disease which affects the cardio-vascular system involving the heart, blood vessels or both is referred to as cardiovascular disease (CVD). Many treatment modalities for CVD had been explained in Brihatrayi (Charaka, Sushruta, Vagbhata) and Laghutrayi (Bhavaprakash and Madhava Nidan). Vaidya Govinddas Sen has mentioned numerous formulations acting on cardiac disorders in his text Bhaishajya Ratnavali. The present study is designed to screen the formulations with Hridya (Cardio protective) effect along with those indicated in Hridaya-roga (Cardiac disorders), Hrid-graha (Chest heaviness), Hrid-shula (Angina pectoris), Hridaya-avrodh (Cardiac arrest) & Hrid-daha (Burning sensation in chest).

Out of 3456 formulations, 173 were found to be described for the treatment of cardiovascular diseases throughout the text including herbal and herbo-mineral formulations.

INTRODUCTION-

Cardiovascular diseases (CVDs) are currently the leading cause of death globally with a greater inclination in economically poor countries as over 80% of cardiovascular death takes place in low and middle income countries. According to WHO, an estimated 17.3 million people died from cardiovascular diseases in 2008 & mortality is expected to reach 23.6 million people by 2030.¹

Cardiovascular disease is caused by disorders of the heart and blood vessels, and includes coronary heart disease (heart attacks), cerebro-vascular disease (stroke), raised blood pressure (hypertension), peripheral artery disease, rheumatic heart disease, congenital heart disease and heart failure. The precipitating factors for cardiovascular disease include alcohol, smoking, tobacco, physical inactivity & an unhealthy diet.²

Atherosclerosis comprises the most common reason of CVDs reflecting variously as Ischemic heart disease (IHD) and stroke. IHD is caused by narrowing of coronary arteries

due to atherosclerosis, and hence also called as coronary artery disease (CAD). India around the globe has the highest rate of morbidity from CAD probably because of genetic predisposition³.

According to Ayurveda, causes of Hridaya roga (Cardiac disorder) are Atiusna Anna (Intake of excessive hot food), Guru Anna (Heavy diet), Kashaya (Astringent) & Katu (Bitter) taste food, Trauma, Excessive exercise, food intake, over indulgence in sexual activity and mental tension⁴. Hridaya roga has been classified into five type viz. Vataja, Pittaja, Kaphaja, Sannipatja and Krimija Hridaya roga. Vascular heart disease, Cardiac arrhythmias, Angina pectoris, Constructive pericarditis, Aneurism and dilatation of heart and Aorta can be considered as Vataja Hridaya Roga⁵. Endocarditis, Valvulitis, Myocarditis and Pericarditis can be considered as Pittaja Hridaya Roga⁶. Metabolic syndrome disease of heart, tumors of heart and thrombosis can be considered as Kaphaja Hridaya Roga⁷ & Infectious cardiac disorder as Krimija Hridaya Roga.

Chart-1 Aetiology specific to each type of Hridaya roga-

Vataja Hridaya Roga ⁸	Pittaja Hridaya Roga ⁹	Kaphaja Hridaya Roga ¹⁰	Sannipataja Hridaya Roga ¹¹	Krimija Hridaya Roga ¹²
Shoka (Grief)	Ushna anna (hot food intake)	Ati-bhojana (Over eating)	Combined cause of vataja, pittaja and Kaphaja Hridaya Roga	Ati-tila sevan (Excessive consumption of sesamum seeds)
Upvasa(Fasting)	Amla food (acidic food intake)	Guru anna (Heavy food)		Ati-ksheer sevana (Excessive consumption of milk and milk product)

Ati-vyayama (Excessive exercise)	Lavana (Salty food)	Snigdhanna (Fatty meals)		Ati-guda sevan (Excessive consumption of Jaggery)
Ruksha Anna (un-unctuous meal)	Kshara (Alkaline nature food)	Achintanama (care free life)		Along with causative factor of sannipataja hridaya roga
Shushka Anna (Dry meals)	Katu (Pungent food)	Achestanam (Sedentary life)		
Alpa bhोजना (Scanty meals)	Ajirna Anna(Consuming food during indigestion)	Adhika Nidrasukham (Over Sleep)		
	Aatap (Exposure to sun)			

The Pathogenesis evolution exposes & provides insight into the developmental process of the Hridaya roga. All causes vitiate the doshas which after accumulation further vitiates the Rasa dhatu producing Baadha(obstruction) in hridaya (Heart) leading to exposition of hridaya roga (Heart disease)¹³.

General symptoms of Hridaya roga (Heart disease) are Vaivarnyata [Discoloration and change of complexion (Pallor,Cynosis)], Moorchha (Fainting, Syncope), Jwara (Fever), Kasa (Cough), Hikka (Hiccough), Swasha (Dyspnoea), Aasyavairasya (Bad taste of mouth), Trisha (Thirst), Pramoha (Stuper/Delerium,mental confusion), Chardi (Vomiting), Kaphotklesha (Nausia, Excessive salivation), Ruja (Pain), Aruchi (Anorexia)¹⁴.

Bhaishjya Ratnavali i.e. Gem of the Medicinal formulae, composed in 19th century A.D. by Shri Govind Das is a unique classical textbook of Ayurveda emphasizing the materia-medica & formulations of Ayurvedic pharmaceuticals. Divided into 106 chapters, each dealing with separate disease & indispositions covering about 3456 herbal & herbo-mineral formulations. It has been the most popular collection among practitioners as well as the manufacturers of Ayurvedic medicines in India as well as neighbouring countries. In this text, the indicated medicaments of different classics as well as some new formulations are described in all chapters that are addressing an individual disease. A unique chronology of different kinds of Ayurvedic dosage forms to treat a single disease has been followed in each chapter along with description of Pathya-Apathya at end of each chapter. This text updates the entire gamut of Ayurvedic recipes immediately before the impact of the West on Indian medical system. Now-a-days, it is visible that global population is looking very positively towards alternative systems of medicine, so this text may prove helpful to achieve quality & safe Ayurvedic medicines.

MATERIALS AND METHODS:

This study presented literary review on Bhaishjya Ratnavali focusing mainly on cardio-protective formulations & found 173 formulations to act as cardioprotective. Govindas sen has directly mentioned the karma or action of these formulations as Hridya (cardio-protective). Formulations with Hridya property and those indicated in hridaya roga, Hritshula (Angina Pectoris), Hrid-graha (Chest heaviness), Hridayarodha(Cardiac arrest), Hrida daha (Burning chest) were screened. Obtained data is presented accordingly as formulations with Hridya (Cardio-protective) property and indication in different hridaya roga with corresponding reference.

Table 2-Hridya yoga mentioned in Bhaishjya Ratnavali

S. No	Name of the Formulation	Respective reference*
1	Vishamjwarantaka Lauha (Dwitiya)	B.R. 5/1154/176
2	Jwalanala Rasa	B.R. 10/157/347
3	Kamdeva Ghrita	B.R. 13/154/406
4	Karpuradya Churna	B.R. 14/36/414
5	Kanaksunder Rasa	B.R. 14/194/427-28
6	Shri Damarananda Abhra	B.R. 15/73/448
7	Yavanishadava	B.R. 18/23/483
8	Shiva Ghrita	B.R. 24/91/518-19
9	Guda Ghrita Yoga	B.R. 27/37/592
10	Rasona Pinda (Mahana)	B.R. 29/151/624-25
11	Haritaki Khanda	B.R. 30/210/654
12	Puga Khanda (Aparā)	B.R. 30/226/655-56
13	Narikela Khanda Brihat	B.R. 30/240/657
14	Bijapuradya Ghrita	B.R. 30/259/658
15	Chintamani Rasa	B.R. 33/48/693
16	Prameha Chintamani Rasa	B.R. 37/190/737
17	Rasaabhra Mandura	B.R. 42/130/802
18	Saureshwar Ghrita	B.R. 45/47/837
19	Amritannkur Lauha	B.R. 54/193/900-01
20	Pippali Khanda	B.R. 56/134/929
21	Sarasvatarishta	B.R. 73/190/1115-16
22	Kasturi Modaka	B.R. 86/61/1166
23	Chandanasava	B.R. 88/39/1174
24	Surendra Modaka	B.R. 94/12/1197

*B.R.- Bhaishjya Ratnavali, 1st number - chapter number, 2nd one - respective verse & 3rd one - page number

Table 3-Formulations indicated in Hrid-Roga mentioned in Bhaishajya Ratnavali

S. No	Name of the Formulation	Respective reference*
1	Lohasava	B.R. 5/1256/182-83
2	Pippali Paka	B.R. 5/1391/196-97
3	Pathadya Churna	B.R. 8/34/243
4	Talishadi Gutika Churna	B.R. 8/121/250
5	Vaartaka Gutika	B.R. 8/126/250-51
6	Kushmanda Kalyanak	B.R. 8/153/252-53
7	Maharaj Nripativallabh Rasa	B.R. 8/378/270-71
8	Aayama Kanjika	B.R. 8/552/286
9	Samsharkara Churna	B.R. 9/37/301
10	Kakkoladya Churna	B.R. 9/52/302-03
11	Pranada Gutika	B.R. 9/86/305-06
12	Nagarjuna Yoga	B.R. 9/93/306-07
13	Vaartaku Gudika	B.R. 9/140/311
14	Drakshasava	B.R. 9/174/316
15	Bhaskar Lavana	B.R. 10/86/340
16	Mahashankh Vati (Dwitiya)	B.R. 10/210/351-52
17	Navayasa Lauha	B.R. 12/28/378
18	Kamlaantaka Lauha	B.R. 12/50/379-80
19	Dhatryarishta	B.R. 12/122/386
20	Lohasava	B.R. 12/133/387
21	Vasakhanda Kushmanda	B.R. 13/106/401-02
22	Saptaprashta Ghrita	B.R. 13/131/404-05
23	Talishadya Churna Modaka	B.R. 14/31/413
24	Vasavleha (Brihat 3)	B.R.14/58/415
25	Chyawanprash	B.R. 14/68/416-17
26	Baladya Ghrita	B.R. 14/239/432
27	Amritprash Ghrita	B.R. 14/274/435
28	Talishadi Churna Modaka	B.R. 15/38/445
29	Vijaybhairav Rasa	B.R. 15/83/449
30	Vasant Tilak Rasa	B.R. 15/155/454-55
31	Agastya Haritaki	B.R. 15/178/456
32	Shwaskuthar Rasa (Dwitiya)	B.R. 16/48/466-67
33	Nagarjunabhra Rasa	B.R. 16/66/468
34	Chhagaladya Ghrita (Brihat)	B.R. 26/243/551-53
35	Vaishvanara Churna	B.R. 29/50/618
36	Pathadya Churna	B.R. 29/63/619
37	Ajmodadi Vataka	B.R. 29/125/623
38	Hingwadi Churna	B.R. 31/33/666
39	Lasuna Kshira	B.R. 32/14/671
40	Kankayan Gutika	B.R. 32/73/678
41	Danti Haritaki	B.R. 32/85/678-79
42	Pravalapanchamrita Rasa	B.R. 32/119/681-82
43	Traymaanadya Ghrita	B.R. 32/155/685
44	Pippalyadi Churna	B.R. 33/2/688
45	Haritakyadi Churna	B.R. 33/4/688
46	Pushkarmooladi Kalka	B.R. 33/5/688

47	Shunthi Kwath	B.R. 33/6/688
48	Pushkaradi Kwath	B.R. 33/7/688
49	Arjunadisiddha Kshira	B.R. 33/11/689
50	Arjunatwak Churna	B.R. 33/12/689
51	Sukshma Eladi Churna	B.R. 33/14/690
52	Trivritadi Churna	B.R. 33/15/690
53	Pushkarmoola Churna	B.R. 33/17/690
54	Godhumarjuna Churna	B.R. 33/18/690
55	Nagbala Arjuna Churna	B.R. 33/19/690
56	Hingwadi Churna	B.R. 33/21/690
57	Kakubhadi Churna	B.R. 33/23/691
58	Pathadya Churna	B.R. 33/26/691
59	Dashmoola Kwath	B.R. 33/27/691
60	Godhumarjuna Yavagu	B.R. 33/28/691
61	Trinetra Rasa	B.R. 33/35/692
62	Nagarjuna Abhra	B.R. 33/37/692
63	Hridyarnava Rasa	B.R. 33/40/692
64	Panchanan Rasa	B.R. 33/41/693
65	Prabhakar Vati	B.R. 33/43/693
66	Chintamani Rasa	B.R. 33/47/693
67	Vishveshwar Rasa	B.R. 33/51/693
68	Shankar Vati	B.R. 33/55/693-94
69	Kalyansunder Rasa	B.R. 33/59/694
70	Ratnakara Rasa	B.R. 33/65/694
71	Vallabhaka Ghrita	B.R. 33/68/695
72	Shwadanshtradya Ghrita	B.R. 33/71/695-96
73	Baladya Ghrita	B.R. 33/73/696
74	Arjuna Ghrita	B.R. 33/74/696
75	Parthadyarishta	B.R. 33/77/696
76	Vidari Ghrita	B.R. 35/33/709-10
77	Vyoshadyashukta Prayoga	B.R. 39/9/746
78	Narayana Churna	B.R. 40/53/758
79	Abhaya Lavana	B.R. 41/40/772-73
80	Punarnavadyarishta	B.R. 42/191/807-08
81	Panchtikta Ghrita guggulu	B.R. 54/236/904
82	Mahatikta Ghrita	B.R. 54/248/905
83	Khadirarishta	B.R. 54/369/914
84	Saubhagya Shunthi Modaka	B.R. 56/117/928
85	Shunthi Khanda	B.R. 56/123/928
86	Sarivadi Vati	B.R. 62/77/983
87	Sarvangasunder Rasa	B.R. 66/56/1034
88	Shri Neelkantha Rasa	B.R. 73/150/1112-13
89	Kaamagnisandipana Modaka	B.R. 74/206/1133-34
90	Chhagaladya Ghrita Brihat	B.R. 74/323/1141-42

*B.R.- Bhaishjya Ratnavali, 1st number - chapter number, 2nd one - respective verse & 3rd one - page number

Table 4-Formulations indicated in Hrit-Shula mentioned in Bhaishajya Ratnavali

S. No	Name of the Formulation	Respective reference*
1	Kantkaryadi Kwath	B.R. 5/172/86
2	Shri Nripativallabh Rasa	B.R. 8/356/268-69
3	Vijay Churna	B.R. 9/43/302
4	Vasavleha	B.R. 14/39/414
5	Vasavleha (Brihat 1)	B.R. 14/44/414-15
6	Vasavleha (Brihat 2)	B.R. 14/52/415
7	Chhagaladya Ghrita (Dwitiya)	B.R. 14/261/434
8	Mahodadhi Rasa	B.R. 15/102/450-51
9	Vasavleha	B.R. 15/181/457
10	Dashmoola Kwath	B.R. 16/22/464
11	Tejovatyadya Ghrita	B.R. 16/104/471-72
12	Yavanishadava	B.R. 18/24/483
13	Kubjvinod Rasa	B.R. 26/132/542
14	Chhagaladya Ghrita (Brihat)	B.R. 26/243/551-53
15	Vishnu Taila (Swalpa)	B.R. 26/311/557-58
16	Vishnu Taila (Madhyam)	B.R. 26/322/558
17	Saindhavadya Taila	B.R. 29/220/630
18	Saindhavadya Taila (Brihat)	B.R. 29/226/630-31
19	Hingwadi Churna	B.R. 30/50/640
20	Hingwadi Churna	B.R. 30/52/640
21	Ruchakadi Churna	B.R. 30/53/640
22	Erandasaptak Kwath	B.R. 30/55/640
23	Matulungamooladi Kwath	B.R. 30/56/640
24	Mrigshringa Bhasma	B.R. 30/58/640-41
25	Shankhrasa Gudika	B.R. 30/93/644-45
26	Shularaj Lauha	B.R. 30/135/648
27	Chatuhsama Lauha	B.R. 30/146/648-49
28	Shatavari Mandura Brihat (Dwitiya)	B.R. 30/199/653
29	Khandamalaki	B.R. 30/232/656
30	Bijapuradya Ghrita	B.R. 30/259/658
31	Daadhika Ghrita	B.R. 30/262/658-59
32	Hingwadi Churna Vatika Tritiya	B.R. 32/53/675-76
33	Gulmakuthar Rasa	B.R. 32/115/681
34	Hapushadya Ghrita	B.R. 32/147/684
35	Mrigshringa Bhasma	B.R. 33/29/691
36	Dadimadya Ghrita Brihat	B.R. 37/214/739
37	Manakadi Gudika Brihati	B.R. 41/49/773-74
38	Chitraka Ghrita	B.R. 41/216/787
39	Rohitaka Ghrita (Mehat)	B.R. 41/229/788-89
40	Saptavimnashti Guggulu	B.R. 51/32/871
41	Paniyabhakta Gudika	B.R. 56/57/924
42	Saubhagya Shunthi Modaka	B.R. 56/118/928
43	Kanaka taila	B.R. 65/119/1026
44	Purnachandra Rasa Brihat	B.R. 73/85/1108-09
45	Siddha Makardhwaja	B.R. 73/120/1110-11
46	Chhagaladya Ghrita Brihat	B.R. 74/323/1141-42
47	Pallavasara Taila	B.R. 74/343/1142
48	Kanaka Taila	B.R. 2/33/1241

*B.R.- Bhaishjya Ratnavali, 1st number - chapter number, 2nd one - respective verse & 3rd one - page number

Table 5-Formulations indicated in Hrid-Graha mentioned in Bhaishajya Ratnavali

S. No	Name of the Formulation	Respective reference*
1	Dashmoola Kwath	B.R. 5/240/94
2	Ashtadashang Kwath	B.R. 5/244/94-95
3	Shathyadi Varga Kwath	B.R. 5/252/95
4	Shatavari Ghrita Brihat	B.R. 13/143/405-06
5	Paushkaradi Kwath	B.R. 15/15/442
6	Dasmoolyadi Kwath/ Yavagu	B.R. 16/26/464
7	Trayodashang Guggulu	B.R. 26/101/539-40
8	Bhaskaramrita Abhraka	B.R. 56/38/923

*B.R.- Bhaishjya Ratnavali, 1st number - chapter number, 2nd one - respective verse & 3rd one - page number

Table 6-Formulations indicated in Hridayavrodha mentioned in Bhaishajya Ratnavali

S. No	Name of the Formulation	Respective reference*
1	Kanadi Kwath	B.R. 5/88/77

*B.R.- Bhaishjya Ratnavali, 1st number - chapter number, 2nd one - respective verse & 3rd one - page number

Table 7-Formulations indicated in Hrid-Daha mentioned in Bhaishajya Ratnavali

S. No	Name of the Formulation	Respective reference*
1	Lilavilas Rasa	B.R. 56/31/922
2	SaubhagyaShunthi Modaka	B.R. 56/117/928

*B.R.- Bhaishjya Ratnavali, 1st number - chapter number, 2nd one - respective verse & 3rd one - page number

DISCUSSION:

Acharya Charaka has classified Hridroga into five types viz. Vataja, Pittaja, Kaphaja, Sannipataja and Krimija respectively¹⁵. The same classification is found in Ashtanga hridaya. Acharya Vagbhata has mentioned lakshanas(Symptoms) of each type of Hridroga. In vatika hridroga patient, there will be acute cutting or stretching type of pain in the cardiac region. In Paittika Hridroga patient, there will be thirst, burning sensation, sweating, dryness of mouth and fainting. In Kaphaja Hridroga patient, there will be feeling of seizure in the heart, heaviness in the body, excessive secretion of phlegm, loss of appetite, sweet taste in the mouth. In Sannipatika Hridroga patient, there will be mixed symptoms described in

Vatika, Paittika and Kaphaja types of Hridroga. In Krimija Hridroga patient, there will be acute pain and itching in the cardiac area as main symptoms¹⁶. In this study cardio-protective formulations given in Bhaishajya Ratnavali were screened and documented which can

be more helpful for better treatment modalities and results.

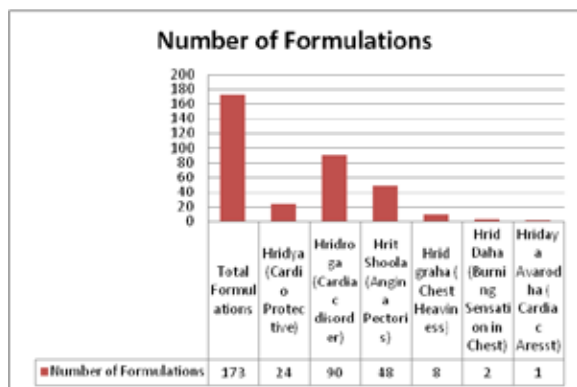
Total number of formulations in Bhaishajya ratnavali is 3456. Out of 3456 formulations 24.(694%) belong to direct hridya, 90(2.60%) in hridarog (Cardiac disorder), 48 (1.39%) in Hrit-shula (Angina pectoris), 8 (0.23%) in Hrida-graha (Chest heaviness), 1 (0.03%) in Hridavarodha (Cardiac ar-

rest) & 2 (0.06%) in Hrid-daha (Chest burning sensation).

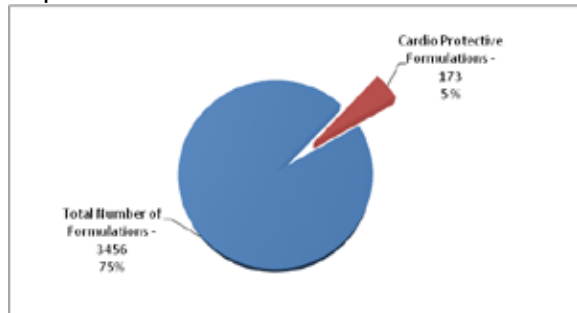
Out of 173 formulations, 24 (13.873%) are directly described as Hridya, 90 (52.023%) with indication in Hridaya roga (Cardiac disorder), 48 (27.746%) in Hrit-shula (Angina pectoris), 8 (4.62%) in Hrida-graha (Chest heaviness), 1 (0.578%) in Hridavarodha (Cardiac arrest) & 2 (1.156%) in Hrid-daha (Chest burning sensation).

To summarize, out of total 3456 formulations in Bhaishajya Ratnavali, 173 (5.006%) are found indicated in Hridaya roga (Cardiac disorder).

Graph-1



Graph-2



CONCLUSION:

The present review on cardio-protective drugs of Bhaishajya Ratnavali provides an overlook of the different formulations that can be used in the treatment of Hridaya roga. Total 173 formulations comprising herbal, mineral and animal origin drugs have been mentioned as Hridya, but the mode of action has not been explained in detail. A detailed clinical study is required to understand the mode of action of these formulations and their efficacy.

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