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Koshatakyadi Yavagu: A Review

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Abstract: ***In Ayurveda, Pathya Kalpana is well described and given a lot of attention. Rice is the primary component of Yavagu, a Pathya kalpana that is high in carbohydrates and has digestive qualities. In the classics, koshatakyadi yavagu is described in relation to Visha chikitsa and is recommended for Visha Vegantara. It is made by boiling one part rice with six times as much herbal infusion of twenty one components. Possessing the property of vishahara. To have the best effect, take it with ghee or honey. This yavagu saves the person's life by delaying the visha vega from entering the subsequent kala.***

Keywords: Koshatakyadi Yavagu, Visha, Visha Vega, Yavagu

1. Introduction

Pathya Kalpana is a vital concept in *Ayurveda* that underscores the importance of diet in maintaining health and preventing illnesses. Different preparation methods (*Samskara*) enhance the nutritional value and effectiveness of these diets.

Yavagu, a prime example, is a rice-based gruel known for its high carbohydrate content and ease of digestion. It's ideal for individuals with low digestive capacity (*Mandagni*), debility (*Dourbalya*), providing substantial nutritional benefits for both patients and healthy individuals.

In *ayurveda*, early treatment of poisoning involves *vamana* and *virechana shodhan* processes. *Yavagu* is used in *samsarjana krama* after *shodhana* process as a part of diet regimen. *Vamana* and *Virechana* procedures cause *Mandagni* and *Dourbalya*. *Yavagu* acts as *Balya*, *Tarpana* and *Agnideepaka*.

The *Charaka Samhita* mentions twenty-eight varieties of *Yavagu*, each tailored with specific medicinal decoctions to treat different ailments.

In texts like *Sushruta Samhita, Ashtanga Sangraha* and *Ashtang Hridya Koshatakyadi Yavagu* is specifically mentioned for its effectiveness in poison treatment.

Visha vega ke samanya lakshana (According to Acharya Sushrut) [1]

vegas	Samanya lakshana
1st	Jivha: shyav varna & stabdhtata (dark color & rigid of tounge) murchit (unconscious), shwas roga (respiratory disease)
2nd	Vepathu(trembling), saado (relaxation), daaha (burning sensation), kanth rooja (pain in throat), vishama amashyapraprti (attainment of poison in stomach), Hridaya Vedana (pain in heart)
3rd	Talusosha (palatine atrophy), amashya tivrashool (severe stomach pain), durvarnam harite shune lochne (eyes discoloration & turn into green discolouration with inflammation)
4th	Pakvashya – amashya toda (Pricking pain in stomach & duodenum), hikka (hiccough), kasa (cough), antrakujanama (gurglings in the intestine) and siraschatigauravam (heaviness in head)
5th	Kapha presek (Dribbling of cough), vaivarnya (discolouration), parvabheda (rupturing of joint), sarva dosha prakopascha (exaggerated of all dosha)
6th	Pragyapranashasch (destruction of intelligence & life), atisaar (diarrhoea)
7th	Skandh-pristh-kati bhang (shoulder- back-pelvic falls down), sannirodashch (death due to asphyxia)

Koshatakyadi Yavagu Ingredients (According to different acharyas)

Sr.no	Ingredients	Sushruta Samhita[2]	Ashtanga Hridaya [3]	Ashtanga sangraha[4]
1.	Koshataki	✓	✓	✓
2.	Agnika	✓	✓	✓
3.	Patha	✓	✓	✓
4.	Suryavalli	✓	✓	✓
5.	Amrita	✓	✓	✓
6.	Abhaya	✓	✓	✓
7.	Shelu	✓	✓	✓
8.	Shirisha	✓	✓	✓
9.	Kinihi	✓	✓	✓
10.	Haridra	✓	✓	✓

11.	Daruharidra	✓	✓	✓
12.	Girivyaha	✓	×	×
13.	Chodrasavhya	×	✓	✓
14.	Shweta Punarnava	✓	✓	✓
15.	Rakta Punarnava	✓	✓	✓
16.	Harenu	✓	×	×
17.	Sunthi	✓	✓	✓
18.	Maricha	✓	✓	✓
19.	Pippali	✓	✓	✓
20.	Brihati	×	✓	✓
21.	Kantkari	×	✓	✓
22.	Shweta Sariva	✓	✓	✓
23.	Krishana sariva	✓	✓	✓
24.	Bala	✓	✓	✓
25.	Atibala	×	×	✓

Chemical constituents & pharmacological action of various drvaya mentioned in koshatakyadi Yavagu

S. No	Dravya	Chemical Constituents	Pharmacological Action
1.	Koshataki [5]	• Water Soluble Ash 3.77%, • Sulphated Ash 8.05%, • Chloroform 1.23%, • Ethyl Acetate 1.02%, • Ethanol 5.43% • Anthroquinone, • Sterols, • Glycosides, • Carbohydrates	• Antimicrobial Effects • Antiparasitic Effect • Anticancer Effect • Antioxidant Effect • Hypoglycemic Effect • Hepato- Cardio- And Nephro-Protective Effects • Gastroprotective Effect • Immunomodulatory Effect
2.	Agnika [6]	• Naphthoquinones Flavonoids, • Alkaloids, • Glycosides, • Saponins, • Steroids, • Tannins, • Triterpenoids, • Coumarins, Carbohydrates, • Phenolic Compounds, • Fixed Oils, • Fats And Proteins	• Antimicrobial Activity • Anti-Inflammatory Activity • Antioxidant Activity • Hair Growth Promoter And Regulation • Antidiabetic Activity • Antiobesity • Antihyperlipidemic Activity • Hepatoprotective Activity • Nephroprotective Activity • Antifertility Activity • Anticancer And Cytotoxic Activity
3.	Patha [7]	• Alkaloids • Pareirubrines A & B • Menismine • Pareirine • Hayatinine	• Anti-Fertility • Anti-Ulcerous • Anti-Inflammatory • Antidiabetic Activity • Hepatoprotective Activity • Antileukemic Activity • Anti-Tumor Activity • Anti- Dengue Activity
4.	Suryavalli [8]	• Cardiac Glycosides, • Carotenoids, • Flavonoids, • Saponin, • Cyanogenic • Glycosides, • Triterpenes, • Sugars, • Tannins	• Anthelminthic Activity • Anti-Bacterial Activity • Anti-Microbial Activity • Anti-Helminthic Activity • Liver Protective Activity • Antioxidant Property • Antifungal Property • Neuroprotective Activity
5.	Amrita [9]	• Alkaloids, • Glycosides, • Steroids, • Flavonoids, • Phenols, • Tannins, • Terpenoids, • Polysaccharides, • Essential Oils	• Anti-Diabetic Activity • Immunomodulatory Activity • Anti-Cancer Activity • Hepatoprotective Activity • Cardioprotective Activity • Antioxidant Activity • Anti-Arthritic Activity • Anti-Stress Activity • Neurodegenerative Activity
6.	Abhaya [10]	• Hydrolysable Tannins • Phenolic Carboxylic Acid • Gallotannins • Ellagitannin • Chebulanin,	• Antibacterial • Antifungal Activities • Anti Hyperglycemic Effect • Antioxidant Activity • Immunomodulatory Activity

		• Neochebulinic Acid, • Chebulagic Acid • Chebulinic Acid	• Radiation Protection • Cardio Protective Effect • Anti-Aging Activities
7.	Shelu [11]	• Allantoin, • B-Sitosterol • Pyrrolizidine Alkaloids, • Coumarins, • Flavonoids, • Saponins, • Terpenes And Sterols	• Antioxidant Activity • Anti-Inflammatory Activity • Wound Healing Activity • Analgesic Activity • Antimicrobial Activity • Antiulcerative Colitis • Antidiabetic
8.	Shirisha [12]	• Saponin, • Alkaloids, • Glycosides, • Flavonoids • Tannins	• Antimicrobial • Anti-Arthritis Activity • Antidiabetic Activity • Anti-Inflammatory Activity
9. .	Kinihi [13]	• Carbohydrate, • Proteins, • Phenols • Enzymes	• Hypoglycaemic • Hypolipidemic Activity • Anti-Inflammatory • Antioxidant Activity • Anti Asthmatic • Antileprotic • Wound Healing Activity • Anti-Dandruff Activity
10.	Haridra [14]	• Essential Oils • Polysaccharides • Curcuminoids	• Wound Healing Activity • Anti-Inflammatory Activity • Anti-Oxidant Activity • Anti-Bacterial Activity • Anti-Viral Activity • Anti-Diabetic Activity • Anti-Cancer Activity • Anti-Coagulant Activity
11.	Daruharidra [15]	• Alkaloid • Berbamine, • Berberine, • Oxycanthine, • Epiberberine, • Palmatine, • Dehydrocaroline	• Hepatoprotective • Antidiabetic • Anticancer • Antimalarial • Antimicrobial • Anti-Inflammatory • Antioxidant
12.	Koyala [16]	• Tannins, • Phlobatannin, Carbohydrates, • Saponins, • Triterpenoids, • Phenols, • Flavanoids, • Flavonol Glycosides, • Proteins	• Antimicrobial Effect • Antiparasitic • Insecticidal Effects • Antiinflammatory • Antipyretic • Analgesic Effects • Anticancer Effect • Antioxidant Effects • Antidiabetic Effect
13.	Chodrasavhya [17]	• Flavonoids, • Isoflavonoids, • Tannins, • Stigmasterol, • Vitamin K, • Vitamin C • Proteins	• Hepatoprotective • Antioxidant
14.	Shweta Punarnava [18]	• Flavonoids, • Alkaloids, • Steroids, • Triterpenoids, • Lipids, • Lignins, • Carbohydrates, • Proteins, • Glycoproteins	• Anti Diabetic Activity • Anti Oxidant Activity • Anticancer Effect • Analgesic Activity • Hepatoprotective Activity • Antiviral Activity • Antifungal Activity • Antifibrinolytic Activity
15.	Rakta Punarnava [19]	• Flavonoids, • Alkaloids, • Steroids, • Triterpenoids, • Lipids,	• Anti Diabetic Activity • Anti Oxidant Activity • Anticancer Effect • Analgesic Activity • Hepatoprotective Activity

		• Lignins, • Carbohydrates, • Proteins, • Glycoproteins	• Antiviral Activity • Antifungal Activity • Antifibrinolytic Activity
16.	Harenu [20]	• Flavonoids • Iridoids • Terpenoids • Alkaloids • Essential Oils	• Anti-Tumor Activity • Insecticidal Activity • Antimicrobial Effect • Anti-Cataract Effect • Hepatoprotective Effect • Anti-Hyperglycemic Activity
17.	Sunthi [21]	• Phenolic Compounds, • Flavonoids, • Carbohydrates, • Proteins, • Alkaloids, • Glycosides, • Saponins, • Steroids, • Terpenoids	• Antimicrobial Activity • Nephroprotective Activity • Hepatoprotective Activity • Larvicidal Activity • Anticancer Activity • Analgesic Activity • Anti-Inflammatory Activity • Immunomodulatory Activity • Antioxidant Activity
18.	Maricha [22]	• Phenolics, • Flavonoids, • Alkaloids, • Amides • Steroids, • Lignans, • Neolignans, • Terpenes, • Chalcones	• Antimicrobial Activity • Antioxidant Activity • Anti-Cancer Activity • Anti-Inflammatory Activity • Hepatoprotective Activity • Anti-Diarrheal Activity • Digestive Activity • Antidepressant Activity • Anticonvulsant Activity • Analgesic Activity
19.	Pippali[23]	• Alkaloids, • Lignans, • Flavonoids, • Amides, • Esters, • Essential Oils • Organic Acids	• Antiproliferative, • Anticancer, • Antitumour, • Neuro-Pharmacological Activity • Anti-Alzheimer's Disease Activity • Anti-Parkinson's Disease Activity • Antidepressant Activity • Antistress Activity • Central Nervous System Depressant Activity
20.	Brihati[24]	• Alkaloid, • Saponins, • Phenols, • Solamargine, • Solasurine, • Solasonine • Ascorbic Acid • Flavonoids	• Antimicrobial Activity • Anti-Larvicidal Activity • Anthelmintic Activity • Antimalarial Activity • Antioxidant Activity • Anti-Diabetic Activity • Anti-Asthmatic Activity • Anti-Cancerous Activity
21.	Kantkari[25]	• Alkaloids, • Sterols, • Saponins, • Flavonoids • Carbohydrates, • Fatty Acids, • Amino Acids	• Anti-Inflammatory Activity • Hepatoprotective Activity • Anti-Hyperglycemic Activity • Anti-Histaminic Activity • Anti-Asthmatic And Anti-Allergic Activity • Immunomodulatory Activity • Nephroprotective Activity • Cardiotonic Activity
22.	Shweta Sariva[26]	• Alkaloids, • Steroids, • Terpenoids, • Flavonoids, • Saponins, • Phenolic Compounds, • Tannins, • Lignin, • Inulin • Cardiac Glycosides	• Anti-Inflammatory Activity • Antioxidant Activity • Anti-Arthritic Activity • Anti-Cancerous Activity • Anti-Hepatocarcinogenic Effect • Anti-Angiogenic Activity • Anti-Diabetes Activity • Anti-Cataractous Activity • Antivenom Activity • Anti-HIV-1 Activity • Diuretic Activity
23.	Krishana Sariva [27]	• Alkaloids, • Steroids, • Terpenoids, • Flavonoids, • Saponins,	• Anti-Inflammatory Activity • Antioxidant Activity • Anti-Arthritic Activity • Anti-Cancerous Activity • Anti-Hepatocarcinogenic Effect

		• Phenolic Compounds, • Tannins, • Lignin, • Inulin • Cardiac Glycosides	• Anti-Angiogenic Activity • Anti-Diabetes Activity • Anti-Cataractous Activity • Antivenom Activity • Anti-HIV-1 Activity • Diuretic Activity
24.	Bala[28]	• Alkaloids, • Ecdysteroids, • Flavonoids • Ephedrine, • β Phenethylamine, • Vasicinone, • β-Sitosterol, • Malvalic Acid, • Stigmasterol	• Antimicrobial Activity • Anti-Inflammatory • Analgesic Activity • Anti-Ulcer Activity • Anti-Diabetic Activity • Nephroprotective Activity • Anti-Stress • Adaptogenic Activity • Cardiovascular Activity • Antimelanogenesis • Anti-Parkinson's Disease • Antioxidant Activity

Ras panchak of Ingredients in koshatakyadi Yavagu [29]

Sr.No	Ingredients	Rasa	Guna	Veerya	Vipaka
1.	Koshataki (Luffa acutangular)	Tikta	Laghu Ruksha Tikshna	Ushna	Katu
2.	Agnika (Plumago zeylanica)	katu Tikta	Laghu Ruksha Tikshna	Ushna	Katu
3.	Patha (Cissampelos pareira)	Tikta	Laghu Tikshna	Ushna	Katu
4.	Suryavalli (Gynandropsis gynanndra)	katu	Tikshna	Ushna	Katu
5.	Amrita (Tinospora cordifolia)	Tikta Kashaya	Guru Snigdha	Ushna	Madhura
6.	Abhaya (Terminalia chebula)	Panchras lavanrahita	Laghu Ruksha	Ushna	Madhura
7.	Shelu (Cordia dichotoma)	Madhura	Snigdha Pichila Guru	sheeta	Madhura
8.	Shirisha (Albizia lebbeck)	Kashaya Tikta Madhura	Laghu Ruksha Tikshna	Ushna	Katu
9.	Kinihi (Achyranthes aspera)	Katu Tikta	Laghu Ruksha Tikshna	Ushna	Katu
10.	Haridra (Curcuma longa)	Tikta Katu	Laghu Ruksha	Ushna	Katu
11.	Chordrsavhaya (Phaseolus trilobus)	Madhura	Laghu Ruksha	sheeta	Madhura
12.	Daruharidra (Berberis aristata)	Tikta Kashaya	Laghu Ruksha	Ushna	Katu
13.	Koyala *(*Clitoria ternatea*)*	Tikta Kashaya	Laghu Ruksha	Ushna	Katu
14.	Shweta Punarnava (Boerhavia diffusa)	Madhura Tikta Kashaya	Laghu Ruksha	Ushna	Katu
15.	Rakta Punarnava (Boerhavia diffusa)	Madhura Tikta Kashaya	Laghu Ruksha	Ushna	Katu
16.	Harenu (Vitex negundo)	Katu Tikta	Laghu Ruksha	Ushna	Katu
17.	Sunthi (Zingiber offinale)	Katu	Guru Ruksha Tikshna	Ushna	Madhura
18.	Maricha (Piper nigrum)	Katu	Laghu Tikshna	Ushna	Katu
19.	Pippali (Piper longum)	Katu	Laghu Snigdha	Ushna	Madhura
20.	Brihati (Solanum surattense)	Katu Tikta	Laghu Ruksha Tikshna	Ushna	Katu
21.	Kantkari (Solanum xanthocarpum)	Tikta Katu	Laghu Ruksha Tikshna	Ushna	Katu
22.	Shweta Sariva (Hemidesmus indicus)	Madhura Tikta	Guru Snigdha	Ushna	Katu
23.	Krishana sariva (Hemidesmus indicus)	Madhura Tikta	Guru Snigdha	Ushna	Katu
24.	Bala (Sida cordifolia)	Madhura	Laghu Snigdha	sheeta	Madhura

2. Discussion

Koshatakyadi Yavagu is explained in classics books of ayurveda and is used as sarvvishaghan. In medicated decoction according to Acharya Shusruta it contains Twenty one herbal drugs, According to Acharya Vagbhatta it contains twenty two drugs and according Acharya Vridda Vagbhatta it contains twenty three drugs out of which most of the drugs having the superiority of Tikta Ras, having the laghu-ruksh Guna, Ushan Virya, and Katu in Vipaka. Drugs mentioned in koshatakyadi having the properties of vishghana which reduce the toxic effects of poisons.

3. Conclusion

The poison is found to attack successively in seven kalas. The interval of time during which a deadly poison leaves one kala to succeeding kala is called as visha vega, that gives rise to seven stages and finally invades the ojas. The interval that takes place, while poison driven by vayu crosses from one kala to another is known as visha vegantara. Koshatakyadi yavagu is a herbal preparation explained in visha vegantara condition. It also works as the media for various drugs by utilizing drug decoctions in place of water and honey and ghee as adjuvant. This yavagu retards the visha vega produced by the poison and minimises the effect of poison. It protects the heart- the seat of ojas by reducing the theekshnata (hot potency) of the visha.

References

[1] Sushrut Samhita edited by Kaviraj Ambikadutt Shastri, Published by Chaukhambha Sanskrit Sansthan Varanasi, Edition – 2023, Kalpa Sthan, Chapter-2, Verse no – 34-39, pg.no - 34.
[2] Sushrut Samhita edited by Kaviraj Ambikadutt Shastri, Published by Chaukhambha Sanskrit Sansthan Varanasi, Edition – 2023, Kalpa Sthan, Chapter-2, Verse no – 44-46, pg.no – 36.

[3] Astanga Haridayam,edited by atridev gupt, , Published by Chaukhambha Sanskrit Sansthan Varanasi, Edition – 2023,Uttarstahn, Chapter – 35, Verse no – 21-22, pg no – 786.
[4] Astanga Samgraha, edited by atridev gupt, , Published by Chaukhambha Sanskrit Sansthan Varanasi, Vol-2, Uttarstahn, Chapter – 40, Verse no – 52, pg no – 344.
[5] Ali Esmail Al-Snafi, A review on Luffa acutangula: A potential medicinal plant, IOSR Journal Of Pharmacy, (e)-ISSN: 2250-3013, (p)-ISSN: 2319-4219, Volume 9, Issue 9 Series. I (September 2019), PP. 56-67.
[6] Shukla et al, Phytochemistry and pharmacological studies of Plumbago zeylanica L.: a medicinal plant review, Clinical Phytoscience (2021) 7:34.
[7] Arora Manu et al, AN INSIDE REVIEW OF CISSAMPELOS PARERIA LINN: A POTENTIAL MEDICINAL PLANT OF INDIA, IRJP 2012,3 (12).
[8] D. Santhosha, Pharmacognosy, phytochemistry and pharmacological profile of Gynandropsis gynandra L.: A review, Annals of Phytomedicine: An International Journal, Ann. Phytomed., 12(2):275-283. http://dx.doi.org/10.54085/ap.2023.12.2.33.
[9] Gupta et al., Tinospora cordifolia (Giloy): An insight on the multifarious pharmacological paradigms of a most promising medicinal ayurvedic herb, Heliyon10(2024)e26125.
[10] R.Rathinamoorthy et al, Terminalia Chebula - Review on Pharmacological and Biochemical Studies, Int.J.PharmTech Res.2014,6(1),pp 97-116.
[11] Tuli et al., CORDIA DICHOTOMA (INDIAN CHERRY) FORST. – A REVIEW, World Journal of Pharmaceutical and Medical Research, Vol 9, Issue 4, 2023.
[12] Ekta Singh Chouhan et al., A REVIEW ON BIOCHEMICAL AND PHARMACOLOGICAL PROPERTY OF ALBIZIA LEBBECK, International Journal of Pharmacy & Therapeutics, 7(4), 2016, 146-151.
[13] Abhijit Dey, ACHYRANTHES ASPERA L: PHYTOCHEMICAL AND PHARMACOLOGICAL ASPECTS, International Journal of Pharmaceutical Sciences Review and Research, Volume 9, Issue 2, July – August 2011; Article-013.
[14] Tehreem Riaz et.al., Phytochemistry and Phytochemical Potential of Curcuma longa: A Narrative Review, Journal of Science Technology and Research (JSTAR), Volume No.5, Issue No.1 (2024).
[15] Sharma Komal et al, BERBERIS ARISTATA: A REVIEW, International Journal of Research in Ayurveda & Pharmacy, 2(2), 2011 383-388.
[16] Prof Dr Ali Esmail Al-Snafi, Pharmacological importance of Clitoria ternatea – A review, IOSR Journal Of Pharmacy, (e)-ISSN: 2250-3013, (p)-ISSN: 2319-4219 Volume 6, Issue 3 (March 2016), PP. 68-83.
[17] Navpreet Kaur, Phytochemical and Pharmacological Attributes of Phaseolus trilobu, UJPAH Vol. I,ISSN 0973-3507, No. 12, June 2012.
[18] Sahu A N, Phytopharmacological Review of Boerhaavia diffusa Linn.(Punarnava), Pharmacognosy Reviews [Phcog Rev.] -Supplement Vol 2, Issue 4, Jul-Dec, 2008 Page 14-22.
[19] Sahu A N, Phytopharmacological Review of Boerhaavia diffusa Linn.(Punarnava), Pharmacognosy Reviews [Phcog Rev.] -Supplement Vol 2, Issue 4, Jul-Dec, 2008 Page 14-22.
[20] Gandhimathi R et al., AReviewofPhytochemicalandPharmacologicalActivities of Vitex negundo, International Journal of Research in Phytochemistry and Pharmacology. 2023; 13(1): 1-6.
[21] Gaurav Kumar et al., A Review on Pharmacological and Phytochemical Properties of Zingiber officinale Roscoe (Zingiberaceae), Journal of Pharmacy Research 2011,4(9),2963-2966.
[22] Damanhouri ZA, Ahmad A (2014) A Review on Therapeutic Potential of Piper nigrum L. (Black Pepper): The King of Spices. Med Aromat Plants 3: 161. doi: 10.4172/2167-0412.1000161.
[23] BISWAS ET AL., Piper longum L.: A comprehensive review on traditional uses, phytochemistry, pharmacology, and health-promoting activities, Phytotherapy Research,1–52. https://doi.org/10.1002/ptr.7649.
[24] Pradeep Kumar, A review on the pharmaceutical activity of Solanum surattense, Article in GSC Advanced Research and Reviews · June 2021, 07(03), 038–044.
[25] Arora et al., Phyto-Pharmacological Review of Solanum xanthjocarpum Schrad and Wendl, International Journal of Pharmacognosy and Phytochemical Research 2019; 11(4);244-249.
[26] Swathi S, Phytochemical and pharmacological benefits of Hemidesmus indicus: An updated review, Journal of Pharmacognosy and Phytochemistry 2019; 8(1): 256-262.
[27] Swathi S, Phytochemical and pharmacological benefits of Hemidesmus indicus: An updated review, Journal of Pharmacognosy and Phytochemistry 2019; 8(1): 256-262.
[28] Shetu et al., PHARMACOLOGICAL AND PHYTOCHEMICAL IMPORTANCE OF SIDA CORDIFOLIA: A REVIEW, International Journal of Life Sciences and Review, 2019; Vol. 5(4): 60-73.
[29] Dravyaguna – Vijyana, By- Prof. P. V. Sharma, Published by – Chaukhambha Bharati Academy, Edition- 1988, Vol.2.