INTRODUCTION

The knowledge of medicinal plants must have been accumulated in the course of many countries. It is greatly to the credit of the people of India that they were acquainted with a few larger number of medicinal plants than the natives of any other country.

In India, the references to the curative properties of some herbs in the Rigveda seem to be the earliest record of use of plants in medicine. The identity of several plants referred in the Sukrits of the Rigveda can be fixed with reasonable certainty, e.g. of Semal, Pithwan, Palash and Pipal, but references to plants in the Rigveda are very brief. For more detailed account is available in the Atharavaveda. The period of Rigveda is estimated to be between 3500 and 1800 B.C.. After the Vedas, there is no information in the development of this science in India for a period of about 1000 years. Then two most important works on Indian System of medicine have come, the work of Charak and Susruta namely the CharakSamhita and Susruta-Samhita. Susruta-Samhita deals with about 700 drugs, some
of these were not indigenous to India. With the passing of time, more and more plants found entry into native medicine, taking the number of Indian medicinal herbs to about 1500 (Jain, 1968). The great range of temperature (about 49°C to 43°C), rainfall (from 100 mm. to over 10,000 mm.) and attitude (Sea-level to over 6000 m.) in India account for the occurrence of some 20,000 different species of higher plants in India.

The kidney is one of the most vital organs in the body. According to the current knowledge, it has a very fascinating structure and a highly specialized physiological capability. It suffers from specialized type of diseases which have a trend to bring about irreversible changes. Generally it is believed that the human kidneys do not regenerate. Thus the Kidney being a highly specialized organ with vital functions and having a trend to undergo irreversible changes in its common disorders, need specialized care in the management.

Though, there are a large number of drugs mentioned and practised for the treatment of urinary disorders in Indian System of medicine but “PUNARNAVA” (Boerhaavia diffusa Linn.) was found most suitable because of its very popular use in the treatment of the diseases of urinary system and the possibility of the
presence of regenerative property in this drug as its name “PUNARNAVA” suggests.

Gadahpurna “Boerhaavia” is named in honour of the Leyden Physician H. Boerhaavia. *Boerhaavia diffusa* Linn. is a much branched herb, generally spreading on ground or partly ascending. Leave two on each node, one smaller than the other, base of the leaves cordate, lower surface of leaves whitish, upper green. Flowers very small, reddish, in short clusters on long axillary stalks. Fruits with five ridges, glandular (Jain 1968).

The leaves of *Boerhaavia diffusa* Linn. have a sharp taste, appetiser, alexiteric, used in Ophthalmia, and for eye wounds, used in pain of the joints. The seed are tonic, expectorant, carminative, useful in muscular pain, lumbago, scabies, scorpion-string, purify the blood, and hasten delivery.

The root is a well known for its diuretic properties. It is also a very good expectorant, taken in large doses it acts as an emetic. It is used in jaundice, ascites, anasareca, scanty urine and internal inflammations. Mixed with dried ginger it is given in urticaria. The powdered root either alone or combined with oxide of iron was given in several cases of anagarea.
The root ground in rice water is given internally for snake-bite (Rasaratnakara, Yogaratnakara); alone or in combination with the root of either Gossypium herbaceum or Glycyrrhiza glabra it is administered internally and externally for scorpion-sting (Yogaratnakara, Nighantarathakara, Brihannighanta ratnakara).

In the Punjab, the drug is considered useful for the eyes. In Bombay, it is used for dropsical swellings. In Goa, the herb is esteemed as a diuretic in gonorrhoea. In the West India, the herb is popular remedy for gonorrhoea.

The plant in combinations with other drugs is prescribed for snake-bite (Charaka-Susruta, Vagbhata) and Scorpion-sting (Susruta).

The plant “PUNARNAVA” (Boerhaavia diffusa Linn.) belonging to the family Nyctaginaceae contains the alkaloid “Punarnavine”. The total alkaloid (Punarnavine) content of roots is 0.04% (Chopra et al., 1956).

The trade name is based on the Sanskrit name of the plant. In old Indian literature it is referred to as “Sothaghna” i.e. destroyer of dropsy.
Keeping in view that the Boerhaavia diffusa Linn. has an extra importance in the field of medicine, this plant was selected for the present study in relation to seed germination, vegetation, flowering, seed production, root development and alkaloid synthesis.

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