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EFFECT OF PUNARNAVĀ (Boerhavia diffusa) IN ANASARCA OF CARDIOPULMONARY ORIGIN

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Introduction

In the Samhitas, properties of Punarnavā are stated as follows:

कटु: कषायानुरसा पाण्डुघ्नी दीपनी परा ।

शोफानिलगरश्लेष्महरी बध्नोदरप्रणुत् ॥ भा.प्र.

पुनर्नवा भवेदुष्णा तिक्ता रूक्षा कफापहा ।

सशोथपाण्डुहृद्रोगकासोर:क्षतशूलनुत् ॥ च. सू. ४/४१

Thus, Punarnavā has been described as Śothaghna (शोथघ्न) and Mūtrala (मूत्रल). The diuretic action of Punarnavā has already been shown in animal experiments and by other scientific methods.

It was interesting to observe this effect in a patient of anasarca of cardiopulmonary origin.

Case History

Mrs. SNK, a 60-year-old female was admitted to the hospital on 12.12.1986 with dyspnea, edema of face and extremities, giddiness, and nausea for 8 days.

The patient was a known case of chronic obstructive pulmonary disease (COPD) and congestive cardiac failure (CCF) since December 1984. She required frequent hospitalizations to control her acute exacerbations during the previous two years.

On admission, she had severe dyspnea (RR 36/min), tachycardia (112/min), bilateral wheeze and basal crepitations, and features of frank CCF.

She was kept on parenteral frusemide 40 mg daily, digoxin 0.125 mg daily, captopril 12.5 mg daily, parenteral theophylline, oxygen by mask, potassium supplements, doxycycline 100 mg daily along with

Dashmūlrishta 20 ml twice daily, and Sitopalādi chūrna 5 gms 6 hourly. She was already maintained on this treatment for the last 6 months without any hospitalization.

Edema of both extremities increased after 3-4 days. In addition to previous symptoms, the patient became more irritable, started the irrelevant talk, and cyanosis increased.

The dose of frusemide was then increased to 120 mg/day and spironolactone was added in a dose of 25 mg twice daily. Despite these, the patient was passing less urine, edema and puffiness of face were persistent, and she developed ascites (abdominal girth 37.5 cm).

Her renal biochemical parameters like BUN, urea, and serum creatinine were within normal limits.

Because of inadequate response to high doses of the above diuretics, she was given 'Decoction of Punarnavā' (Punarnavā roots 100 gm boiled in 800 ml water to make 200 ml of kwāth - strained decoction) in the dose of 4 teaspoonfuls 2 hourly. was given in addition to the above treatment from 30.12.1986.

Within the next 2 days, her urine output markedly increased from 500 ml/day to more than 2500 ml /day. Her chest congestion became less, edema of legs and puffiness of face decreased, irritability reduced, abdominal girth became less.

The dose of frusemide and spironolactone was reduced to 40 mg and 12.5 mg daily respectively, after 3 days. The punarnavā diuresis continued and edema also kept on decreasing consistently.

Despite her high urine output (due to punarnavā), electrolyte balance remained within normal limits (Table 1), and no side effects developed.

TABLE 1: Electrolyte balance

Date	Serum Sodium	Serum Potassium	Serum Chloride
11.12.86	134 m Eq/L	4.7 m Eq/L	100 m Eq/L
02.01.07	135 m Eq/L	4.7 m Eq/L	95 m Eq/L

Remarks:

The above case history illustrates the potential diuretic action of punarnavā which is possibly better than a combination of high doses of frusemide and spironolactone. It must also be noted that the dose of punarnavā was very high as compared to the conventional dose. The Ayurvedic drugs should accordingly be tried at higher doses if they are not found useful in conventional doses. The use of a single drug should be encouraged so that their action can be studied. It is also important to note that despite profuse diuresis and complete reduction of edema fluid, no electrolyte imbalance was caused by punarnavā in the given dose. This also appears to be a positive factor in favor of punarnavā as almost all modern diuretics cause marked electrolyte imbalance.

The patient was allowed to go home on 3.1.87, as she showed adequate clinical improvement. She was advised to take punarnavā decoction in a lesser dose. She is maintained on this dose for 3 further months without any recurrence of congestive cardiac failure or edema.