

## OP 18

### Preparation and evaluation of *Alupuhul Basna* for *Māndam Roga* (nutritional deficiency disorders)

Jansz KM<sup>1\*</sup>, Nishan SPAS<sup>2</sup>

<sup>1</sup>Institute of Indigenous Medicine, University of Colombo, Rajagiriya, Sri Lanka, <sup>2</sup>Unit of Allied Sciences, Institute of Indigenous Medicine, University of Colombo, Rajagiriya, Sri Lanka

**Background:** Sri Lankan Traditional Medicine (TM) paves the path to many treatment modalities. *Basna* preparation is a renowned dietary supplement, indicated in *Māndam Roga*. *Alupuhul Basna* is a unique preparation in the management of *Pāndu Roga* (a type of nutritional deficiency). WHO states, 45% of deaths among children under five years of age are linked to nutritional deficiency.

**Objective:** The purpose of this study was to prepare the *Alupuhul Basna* following the recipe in the Ayurveda Pharmacopoeia, to analyse its pharmacodynamic properties and introduce this as a natural source of macro and micronutrients to combat the nutritional deficiency status.

**Methods & Materials:** The study was carried out as an observational study and the pharmacodynamic properties of each ingredient were reviewed by referring to authentic Ayurveda texts and modern pharmaceuticals. The sensory evaluation of colour, smell, touch and taste were carried out. For its preparation, the fruit of *Alupuhul* (*Benincasa hispida*), 750 mL of lime juice (*Citrus acida*), 750 mL of ginger juice (*Zingiber officinale*), 240 g of *slag* (*Yabora*), 750 mL of *Polpeni* (*Cocos nucifera*), and *Kithulpeni* (*Caryota urens*) were collected. *Alupuhul* fruit was taken and a piece like a lid was cut from the top. The flesh inside the fruit was removed and the mixture of the ingredients was poured into the fruit. The lid was replaced and the fruit was covered with a layer of mud. Kept near a hearth for three days. Then the fruit was opened, the juice was filtered and immediately used.

**Results:** The final preparation was blackish-brown in colour, sweet and sour in taste and smell. Upon analysing the pharmacodynamic properties, 83.34% *Balya*, 83.34% *Dhātu Poṣaṇa*, 83.34% *Agni Dīpana*, 66.67% *Hṛdya*, 50.00% *Rasāyana*, 50.00% *Māndamhara*, 50.00% *Pāndu-kāmalahara* were found. Hence, *Alupuhul Basna* nourishes the *Dhātu*, strengthens the body, stimulates the digestive process and improves the absorption of nutrients in gastro intestinal tract. Further, bioactive compounds of these ingredients are flavonoids, glycosides, proteins, carotenes, vitamin B complexes, iron and other minerals, alkaloids, phenols, tannins, saponins and citric acid which contributes to actions such as anti-inflammatory, immunomodulatory, anthelmintic, cardioprotective and antioxidant.

**Conclusion:** According to the results obtained, *Alupuhul Basna* contains unique nutritional components that can be presented to combat many nutritional deficiencies especially iron-deficiency anaemia. However, biochemical and clinical analysis needs to be conducted to confirm its therapeutic efficacy.