Theme 6: Laboratory diagnosis and Pharmaceuticals OP31

Quality evaluation of selected different marketed brands of polyherbal medicine "Hingwashtak churna" in Kurunegala, Sri Lanka

Dassanayaka D M G G[1], Srikokulan S[1], Christy Jeyaseelan T[2]

[1]*Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna*
[2]*Department of Botany, Faculty of Science, University of Jaffna*

Introduction and Objectives: Hingwashtak churna is a polyherbal medicine that consists of eight ingredients *viz., Piper nigrum Linn, Piper longum, Zingiber officinale Roscoe, Nigella sativa, Trychyspermum ammi Sprague, Cuminum cyminum Linn, Ferula foetida*, and *Saindhava Lavana* in equal proportions. It is used to treat different gastrointestinal diseases like gastric ulcer, bloating, acidity, and joint disease. The quality evaluation of hingwashtak churna needs for its acceptability and safety for stakeholders. This study aimed to evaluate the quality of different selected marketed brands of polyherbal medicine "hingwashtak churna" in Kurunegala, Sri Lanka.

Methods: Three different brands of powder form (H_1, H_2 & H_3) of Hingwasthak churna samples were purchased in Kurunegala, Sri Lanka. The preliminary phytochemical screening and physico-chemical tests such as pH, moisture content, ash values and extractive values were carried out for each brand. The results were analyzed with one-way ANOVA using SPSS 22.

Results: The pH of all three brands was within the acceptable limit (pH 5). Loss on drying value of H_1, H_2 and H_3 found as 9.47% ± 0.045, 9.73% ± 0.092 and 11.14% ± 0.105. Ethanol soluble extractive value of H_1, H_2 and H_3 observed as 29.58% ± 0.351, 23.21% ± 0.271 and 19.86% ± 0.583 and water-soluble extractive value were 36.63% ± 1.100, 35.08% ± 1.056 and 31.39% ± 0.600 respectively. Total ash value of H_1, H_2 and H_3 were 19.07% ± 0.857, 17.56% ± 0.965 and 15.33% ± 0.309. Acid insoluble ash value found as 0.97 ± 0.066%, 1.05% ± 0.025 and 1.52% ± 0.097 respectively. Water-soluble ash value of H_1, H_2 and H_3 were 16.10% ± 0.719, 13.67% ± 0.286 and 15.33% ± 0.536 respectively. The results of physico-chemical parameters obtained from the study showed that there were significant differences ($p>0.05$) among all three marketed brands as well as between each and other brands. Phytochemical screening of aqueous extract revealed the presence of carbohydrates, reducing sugar, flavonoids, saponins, tannins, steroids, phenols, and ascorbic acid in all the brands.

Conclusion: This quality evaluation of three marketed brands of hinguwasthak churna showed that the values of physiochemical parameter of formulations present within the permissible limits as per WHO. This kind of measures are essential to establish the quality of the formulations.

Keywords: Polyherbal medicine, Hingwasthak churna, Quality, Evaluation