Abstract

Herbal formulations play an important role in medicines; however, their suboptimal standardization, in terms of identity, purity, quality, efficacy and safety, has questioned their efficiency in treating various disorders. The present study was conducted to perform quality audit of four herbal formulations, i.e., Ashokarishta (Baidyanath, Dhanwantri, Prabhat, Dabur), Sitopaladi churna (Baidyanath, Dhanwantri, Kashmir, Dabur), Chandraprabha vati (Baidyanath, Dhanwantri, Zandu, Dabur) and Punarnavadi mandur (Baidyanath, Unjha, Zandu, Dabur), marketed by various companies. The quality auditing procedures included analysis of moisture content, ash value and pH, presence of heavy metals, pesticidal residue and microbial contamination. The formulations were also pharmacologically evaluated for anti-inflammatory activity (in vivo; rat paw edema model). In Ashokarishta, Dhanvantari brand did not pass the pH test while all brands failed in total solid contents. Chandraprabha vati (Baidyanath and Dabur) passed total ash content. Sitopaladi churna (Dhanvantari) only passed moisture test. In Punarnavadi mandur, ash value tests were passed by all brands. All the products passed microbial contamination test. None of the heavy metals was detected with higher than permissible limits in any of the formulations. Endosulfan I & II was not recovered in all studied samples. Heptachlor, aldrin, 4-DDT were also not found in all the samples in comparison to standard samples. All the samples were free from radioactive substances as detected by Board of Radiation & Isotope Technology. The formulations also possessed anti-inflammatory activity. However, their activity varied among brands. Chandraprabha vati at Dhanvantari, Punarnavadi mandoor at Zandu, Sitopaladi Churna at Dhanvantari and Ashokarishta at Dabur brand showed better activity as compared to their counterparts. The study concluded that all the formulations were successfully quality audited. The formulations were also found to possess anti-inflammatory activity. However, more research is warranted to explore their anti-inflammatory potential.