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ADULTERATION OF PROPRIETARY CHINESE MEDICINES AND HEALTH PRODUCTS WITH UNDECLARED AGENTS: A CASE SERIES IN HONG KONG

CK Ching, AYW Chan, TWL Mak

Hospital Authority Toxicology Reference Laboratory, Princess Margaret Hospital, Hong Kong

Objectives: Proprietary Chinese medicines (pCMs) and health products, generally considered to be natural and harmless, are commonly used in Chinese for various indications and improving general health. However, adulteration of pCMs and health products with undeclared pharmaceuticals and other agents has been reported previously. Potentially fatal adverse effects could result from the use of these illicit products. The current study aims to examine the problem of adulteration of pCMs and health products in Hong Kong.

Methods: All cases involving use of adulterated pCMs and health products referred to the Hospital Authority Toxicology Reference Laboratory, a tertiary centre providing clinical toxicology analytical services, from 2005 to 2011 were retrospectively reviewed. The number of cases, number of adulterated products, pattern of adulteration, sources of these products, and associated adverse effects, were studied.

Results: From 2005 to 2011, a total of 277 patients involving use of 336 adulterated products were identified. Adulterated pCMs and adulterated health products constitute 62% and 38% respectively. Among the 336 illicit products, 808 adulterants were detected, with a mean of 2.4 adulterants per product (range 1-10). These adulterants consisted of registered pharmaceuticals, banned drugs, drug analogues, animal thyroid tissue, or heavy metals. The six most common classes of adulterants included slimming agents (17.2%), corticosteroids (12.9%), non-steroidal anti-inflammatory drugs (12.6%), oral antidiabetic agents (12.5%), diuretics and laxatives (10.6%), and erectile dysfunction drugs (6.9%). The reported sources of these illicit products, where available, included over-the-counter pharmacies, Internet, herbalists, peddlers, beauty shops, relatives and friends, both locally and outside Hong Kong. Seventy one percent of the patients (n=198) had adverse effects suspected to be related to the adulterated products. The severity of the 181 ascertained poisoning cases, as graded by the poisoning severity score, was shown as follow: fatal (n=1), severe (n=10), moderate (n=136) and minor (n=34). Common adverse effects included hypoglycaemia, iatrogenic Cushing syndrome, palpitation, tachycardia, psychosis, hyperthyroidism, renal impairment and liver impairment.

Conclusions: Adulteration of pCMs and health products with undeclared agents is a significant yet under-recognised problem. These illicit products, disguised as natural and harmless products, pose severe health hazards to the public.