GELSEMIUM POISONING IN A FAMILY AFTER CONSUMPTION OF *CASSYTHA FILIFORMIS* LINN. COLLECTED IN THE COUNTRYSIDE

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Objectives: Acute poisoning caused by natural plant toxins through consumption of plants picked from the wild is not uncommon in Hong Kong. *Gelsemium elegans* Benth. (local Chinese name: 斷腸草 鈎吻 or 葫蔓藤) is one of the most poisonous native plants which can cause toxicities ranging from dizziness to respiratory depression and muscle paralysis after ingestion. We report three cases of gelsemium poisoning in a family after consumption of a homemade herbal tea made of a plant believed to be *Cassytha filiformis* Linn. (Local Chinese name: 無根藤) collected in the countryside of Luk Keng.

Methods: Case reports.

Results: A 53-year-old man and his 54-year-old wife and 19-year-old son presented to the emergency department 11 hours after each having ingested around 300-600 ml of the herbal tea. All of them complained of dizziness, nausea and generalised weakness about 1 hour post-ingestion. Bilateral ptosis was found in all three cases and a weak muscle power of grade 4/5 with muscle fasciculation involving all 4 limbs were noted in two cases. In one case, a slightly raised serum alanine transaminase (ALT) level of 44 IU/L (Reference range: <41 IU/L) and creatine kinase (CK) level of 273 IU/L (Reference range: 24 -180 IU/L) were noted. Both levels returned to normal after admission. Gelsemium alkaloids including gelsemine, koumine, humantenmine, humantenine, humantenirine and gelsevirine were detected in the left-over herbal tea using techniques such as high-performance liquid chromatography coupled to a diode-array detector (HPLC-DAD) and gas chromatography-mass spectrometry (GC-MS). The overall clinical picture was compatible with gelsemium poisoning. All three patients recovered uneventfully after supportive treatment and were discharged on the next day.

Conclusions: *C.filiformis* is generally regarded as non -toxic and it does not contain gelsemium alkaloids. The exact origin
of the gelsemium alkaloids found in the herbal tea was not known in this case as no more unused plant was left for identification and toxicology analysis. There exist three possibilities: (1) *C. filiformis* might have been mixed up with *G. elegans*, as both have vine- like appearance; (2) the plant consumed might have been contaminated by *G. elegans* nearby; or (3) as a parasitic plant, the *C. filiformis* consumed might have parasitised *G. elegans*, absorbing toxic alkaloids from the latter inadvertently in the process of parasitization. This case highlighted the potential public health threat posed by the practice of picking and consumption of wild plants.