

Diuretic and natriuretic activity of two mistletoe species in rats

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ABSTRACT

In different cultural groups, the hemiparasitic plants of the families Loranthaceae and Viscaceae (mistletoes) are frequently used in the treatment of hypertension and/or as diuretic agents. However, it remains unclear as to what commonality makes them diuretic agents or a remedy for hypertension. In this article, the diuretic activity of methanol extracts of *Viscum articulatum* (VA) Burm. f. and *Helicanthus elastica* (HE) (Ders.) Dans. in rats is reported. The extracts were administered orally at doses of 100, 200 and 400 mg/kg to rats that had been fasted and deprived of water for 18 hours. Investigations were carried out for diuretic, saluretic and natriuretic effects. The polyphenolic and triterpenoid contents were determined quantitatively using chemical assays and high performance liquid chromatography (HPLC) analysis, respectively. The extracts of VA and HE demonstrated significant and dose-dependent diuretic activity in rats. It was found that while VA mimics the furosemide pattern, HE demonstrated a dose-dependent increase in diuresis, along with an increase in potassium-sparing effects. Phytochemical analysis revealed that polyphenolics and triterpenoids, such as oleanolic acid and lupeol, are the major phytochemicals involved. It was also found that in different combinations, these phytochemicals differed in the way they influenced the electrolyte excretion. A higher content of polyphenolics in association with lower triterpenoid content was found to favor potassium-sparing effects.

KEYWORDS

Diuretic . *Helicanthus elastic* . polyphenolics . potassium sparing . triterpenoids . *Viscum articulatum*

REFERENCES

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