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We have previously isolated skimmianine and evoxine from the epigeal part of Haplophyllum obtusifolium Ledeb. growing in the Kora-Kola region of the Turkmen SSR [1]. We extracted the epigeal part (1.5 kg) of the plant collected in the environs of the town of Nukus in the flowering stage on May 25, 1984. A crystalline mixture of alkaloids (6.11 g) was obtained from a methanolic extract in the usual way, and this, on treatment with acetone, gave evoxine (3.16 g), mp 154-155°C (from acetone). The mother solution after the separation of the evoxine was evaporated and chromatographed on silica gel (1:40). Gradient elution (hexane, ether, chloroform, methanol) gave 15 mg of haplopine, mp 204-205°C, 25 mg of a base with mp 78-80°C (I), 18 mg of skimmianine, mp 175-176°C, 34 mg of evodine, mp 150-151°C, 50 mg of methylevoxine in the form of an oil, and 1.8 g of evoxine. The known alkaloids were identified by direct comparison with authentic samples [2]. Base (I) had the composition $C_{20}H_{21}NO_6$, M⁺ 371. Its IR spectrum contained absorption bands at (cm⁻¹) 3145 and 3167 (furan ring), 1740 (C=O of an ester), and 1620 and 1583 (aromatic system). There was no absorption due to active hydrogen. The PMR spectrum of (I) (taken in deuterochloroform on a JNM-4H 100/100 MHz instrument) showed signals at (δ , ppm) 7.81 and 7.05 (doublets, 1H each, J = 10 Hz, ortho-aromatic protons), 7.43 and 6.88 (doublets, 1H each, J = 3 Hz, the protons of a furan ring), and 4.26 and 4.00 (singlets, 3H each, two methoxy groups). The remaining signals, at 5.68 (1H, broadened triplet, J = 6.5 Hz), 4.72 (2H, doublet, J = 6.5 Hz), 4.57 (2H, singlet), 1.99 (3H, singlet), and 1.76 (3H, broadened singlet) relate to the protons of a modified isoprenoid chain $-O - CH_2 - CH = C - CH_2COCH_{30}$

The mass spectrum of (I) contained intense peaks of ions with m/z 371 (M⁺), 245, 244, 230, 227, 216, and 127. The characteristics given are identical with those published for acetylhaplatine [3], obtained previously by the acetylation of haplatine. A direct comparison with the IR spectra of the base isolated and of acetylhaplatine showed their identity.

CH2

This is the first time that the alkaloid acetalhaplatine has been detected in a plant.

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