Anti-epileptic Action of Marijuana-Active Substances

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The demonstration of anticonvulsant activity of the tetrahydrocannabinol (THC) congeners by laboratory tests (Loewe and Goodman, *Federation Proc. 6:352, 1947)* prompted clinical trial in five institutionalized epileptic children. All of them had severe symptomatic grand mal epilepsy with mental retardation; three had cerebral palsy in addition. Electroencephalographic tracings were grossly abnormal in the entire group; three had focal seizure activity. Their attacks had been inadequately controlled on 0.13 gm. of phenobarbital daily, combined with 0.3 gm. of Dilantin per day in two of the patients, and in a third, with 0.2 gm. of Mesantoin daily.

Two isomeric 3 (1,2-dimethyl heptyl) homologs of THC were tested, Numbers 122 and 125A, with ataxia potencies fifty and eight times, respectively, that of natural marijuana principles. Number 122 was given to two patients for three weeks and to three patients for seven weeks. Three responded at least as well as to previous therapy; the fourth became almost completely and the fifth entirely seizure free. One patient, transferred to 125A after three weeks, had prompt exacerbation of seizures during the ensuing four weeks, despite dosages up to 4 mg. daily. The second patient transferred to 125A was adequately controlled on this dosage, except for a brief period of paranoid behavior three and a half weeks later; similar episodes had occurred prior to cannabinol therapy. Other psychic disturbances or toxic reactions were not manifested during the periods of treatment. Blood counts were normal. The cannabinols herein reported deserve further trial in non-institutionalized epileptics.

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