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SEIZURE DISORDERS

MIRTH, LAUGHTER AND GELASTIC SEIZURES

One patient with laughter-associated seizures originating in the anterior cingulate gyrus and two patients with complex partial seizures who exhibited mirth and laughter following direct cortical stimulation of the parahippocampal and fusiform gyri are reported from the Johns Hopkins University School of Medicine, Baltimore, MD. Removal of a cavernous hemangioma and the seizure focus in the first patient resulted in freedom from seizures, except when medication was withdrawn at one year following surgery. These case reports favor the localization of the motor act of laughter in the anterior cingulate region and the emotional concomitants of laughter in the basal temporal cortex. (Arroyo S et al. Mirth, laughter and gelastic seizures. Brain Aug 1993;116:757-780). (Respond: Santiago Arroyo MD, Dept of Neurology, Meyer Building 2-147, 600 North Wolfe St, Baltimore, MD 21205).

COMMENT. The authors cite several references to gelastic seizures (seizures with laughter, from the Greek 'gelos' for mirth). Additional reports are included in the classic epilepsy monographs of Turner WA (1907), and Lennox WG (1960). In addition to complex partial seizures, infantile spasms have often been associated with attacks of paroxysmal laughter (Lacy JR, Penry JK. Infantile Spasms. New York, Raven Press, 1976).

Hypothalamic pathology, usually hamartoma, should be suspected in infants with gelastic seizures, and precocious puberty and mental retardation are frequent sequelae. The seizures respond poorly to medication and to surgical removal of the hamartoma.

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