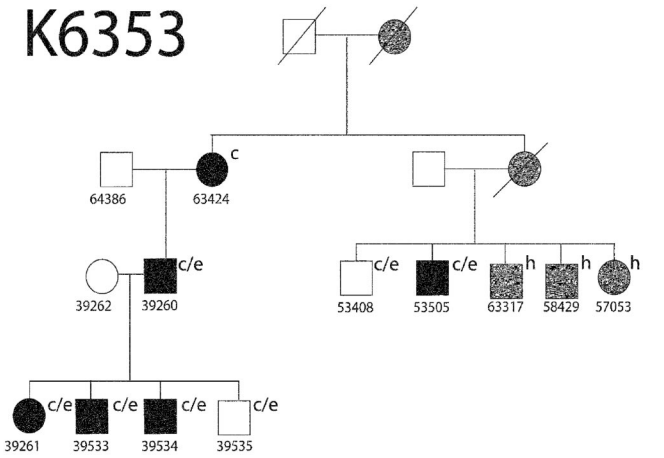
Clinical features of CMT2 due to mitofusin 2 mutations



Lawson et al. describe the clinical features in three families with CMT2 associated with novel mutations in the mitofusin 2 gene, a common cause of axonal CMT (23% of cases). Affected individuals showed age-independent variability of expression, and clinical examination was more sensitive than electrophysiology in identifying patients.

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*The accompanying editorial by Mary M. Reilly places this newly characterized cause of CMT2 into context of CMT 1 and the 15 or more other causes of CMT 2. The GTPase, mitofusin 2 gene (*MFN2*) (a gene encoding MFN2, a mitochondrial fusion protein), is the primary gene mutated in CMT2A.* MFN2 *mutations cause a classical CMT2 phenotype: distal predominant lower limb wasting and weakness, sensory loss, and hyporeflexia. An important clinical point identified by Lawson et al. is the greater sensitivity of the clinical examination in determining affected status vs neurophysiology—confirming the impression of clinicians evaluating CMT2.*

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Infantile spasms and intellectual outcomes in tuberous sclerosis complex

Goh et al. found that 64% of 50 patients with tuberous sclerosis complex with a history of infantile spasms had mental retardation. Risk factors included a prolonged duration of infantile spasms, prolonged time from treatment initiation to spasms cessation, and poor control of subsequent seizures following infantile spasms.

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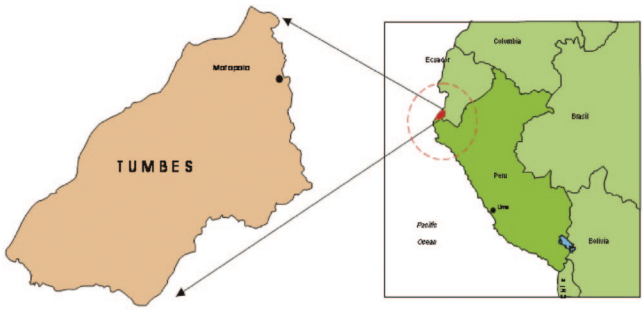
Neurocysticercosis, major contributor to seizures in Peru



Neurocysticercosis is commonly seen in individuals with seizures in endemic areas. Montano et al. studied 903 residents of an endemic area in Peru and found clear associations among seizures, serology, and CT findings. In this area, neurocysticercosis is a common cause of seizures.

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Metabolic syndrome and intracranial atherosclerosis

Bang et al. showed that metabolic syndrome, but not conventional risk factors, was independently associated with intracranial atherosclerosis. Treatment of metabolic abnormalities may be an important prevention strategy for intracranial atherosclerosis.

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The accompanying editorial by Bushnell and Guzick notes that the metabolic syndrome includes three or more of the following: abdominal obesity, elevated triglycerides (≥150 mg/dL) or fasting glucose (≥110 mg/dL), low high density lipoprotein cholesterol (< 40mg/dL for men, <50 mg/dL for women), and hypertension (systolic BP <130 mm Hg, diastolic BP >85 mm Hg, or use of antihypertensive medication). The metabolic syndrome is a risk factor for vascular disease, particularly stroke. The demonstration by Bang et al. of an association between metabolic syndrome and large vessel intracranial disease and the evidence from the recent WASID trial showing that stroke patients with such intracranial disease are at very high risk of recurrent stroke—15% in year 1 and 21% over 2 years for the ASA group and 17% in year 1 and 22% over 2 years for the warfarin group—suggest that recognition and treatment of metabolic syndrome may help to prevent stroke.

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Initial diagnoses given to persons with FXTAS

Hall et al. find that persons with the recently described fragile X-associated tremor/ataxia syndrome (FXTAS) were initially given multiple, varied diagnoses. They suggest guidelines for selecting patients for diagnostic testing.

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Very fragile FXTAS

O'Dwyer et al. report a woman carrier of the FMR1 gene in the premutation range, who presented with tremor and severe gait ataxia following treatment with carboplatin-containing chemotherapy.

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The accompanying editorial by Kamm and Gasser notes that Fragile X syndrome (FXS) is the most common inherited cause of mental retardation. It is caused by an expansion of a CGG trinucleotide repeat in the 5'UTR of the FMR1 *gene on the X chromosome to more than 200 repeats (full mutation). Mothers of patients with Fragile X syndrome typically are not mentally retarded but carry an* FMR1 *repeat expansion between 55 and 200 repeats (premutation). The Fragile X associated tremor ataxia syndrome (FXTAS) has been identified in male premutation carriers, typically grandfathers of boys with FXS who had passed on the premutation to their daughters. FXTAS includes progressive intention tremor and gait ataxia. Less constant features include mild parkinsonism, peripheral neuropathy, autonomic dysfunction, and mild cognitive deficits. T2 hyperintensities in the middle cerebellar peduncles (the "MCP sign") are observed in many patients. It is reasonable to test patients for FXTAS if there is 1) unexplained cerebellar ataxia in males >50 or 2) action tremor, parkinsonism, or dementia in males >50 with either a family history of mental retardation or the MCP sign on MRI.*

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There is a Patient Page on this topic: www.neurology.org

Lower mortality of patients with ischemic stroke on lipid-lowering agents

Elkind et al. found that among 650 patients with ischemic stroke, 90-day mortality was lower in those already prescribed lipid-lowering agents at the time of their stroke (1.8% vs 10.6%). In 90% of the patients the agents were HMG-CoA reductase inhibitors—statins.

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Decreases in CSF Aβ42 levels precede cognitive decline in FAD

Moonis et al. report that presymptomatic subjects with pathologic PS1 mutations demonstrate low Aβ42 levels preceding cognitive decline by many years providing an opportunity to test putative therapies before clinical symptoms develop.

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