HIV encephalopathy is the most common neurologic manifestation of HIV infection in children and can be its presenting feature, namely as spastic tetraplegia. Neurodevelopment impairment in HIV-infected children is still common, especially in non-treated children.

### HISTORY
- 8y, ♂
- 2-year history of motor and cognitive regression
- gait disturbance
- dysarthria
- weight loss
- bladder and bowel incontinence
- numerous papular skin lesions

### PHYSICAL EXAM
- Dysarthria
- Muscular atrophy
- Spastic paraparesis with brisk and spreading stretch reflexes, especially on the right side
- Bilateral extension plantar responses
- Extinguishable clonus
- Papular/nodular skin lesions (limbs and trunk)
- Oral lesions compatible with candidosis

### BRAIN AND SPINAL CORD MRI:
“Cortico-subcortical, cerebellar and brainstem atrophy, with prominent ventricles and sulci, multifocal white matter lesions, thinning of corpus callosum, basal ganglia calcifications, and spinal cord atrophy mainly in posterior and lateral columns; spectroscopy: decrease NAA (neuronal depletion) especially in frontal region”

### SEROLOGIC TESTING (WESTERN BLOT):
- Antibody HIV infection positive (mother and son)
- CSF: 193258 copies/mL; negative for opportunistic agents

### CO-INFECTIONS/COMORBIDITIES:
- Molluscum contagiosum (biopsy confirmed) – surgical treatment
  - Oral candidosis - Fluconazol
- Toxoplasmosis – Pyrimethamine, Sulfadiazin, Folinic acid
- Urinary tract infection (E.coli ESBL+) – Amoxiclav + Gentamicin
  - Ischemic maculopathy
  - Vitamin D deficit (5mg/dL) – supplementation
  - Epilepsy – Levetiracetam

### LEARNING POINTS
- Upper motor neuron disease (spastic tetraplegia) was the presenting feature of HIV infection
- Long-standing untreated infection (vertical transmission) → subacute progressive form/ later-onset encephalopathy: similar to the adult form
- Child from an african region (~two thirds of worldwide new HIV infections)
- Clinical diagnosis → CSF and imaging studies: exclude other diagnoses!

### AIDS + Neurological Complications:
- Lopinavir, Ritonavir, Abacavir, Lamivudin

### Motor skills
- Spastic paraparesis/ pseudobulbar palsy
- Recovery of some motor skills

### Cognitive skills
- School deterioration
- Better school performance, ability to read/write

### Co-infections/comorbidities:
- § Molluscum contagiosum (biopsy confirmed) – surgical treatment
  - Oral candidosis - Fluconazol
- § Toxoplasmosis – Pyrimethamine, Sulfadiazin, Folinic acid
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### CSF viral load: decline in HIV RNA with HAART parallels the reversal of neurological deficits
- Is HIV-myelopathy also a pathologic substrate for motor dysfunction in this child?
- HAART with good BBB penetration has a good impact on the disease (radiological regression of lesions and clinical improvement)
- Poorer survival in adults than in children

### References: