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| Case I | | | | | | | | | |
| Admission & | **1** | | **2** | **3** | | | **4** | | |
| Time Course | **Age: 24 y** | | **3 y later** | **2 y later** | | | **3 months later** | | **One month later** |
| Clinical Properties | Right-sided weakness and numbness | | Paraparesis | 6 months after childbirth  Paresthesias and numbness in extremities, face and tongue | | | Quadriparesis (LE>UE, distal>proximal); hyperactive DTR; hypoesthesia in distal extremities, diminished position sensation in lower limbs, severe allodynia in all extremities diminished visual acquity (left>right); absent left pupillary reflex; left sided peripheral hemifacial paresis and hypoesthesia; severe ataxia, bilateral dysmetria EDSS=8.5 | | Generalized hyporeflexia Facial diplegia  Left sided ptosis |
| MRI | Demyelinating disease | | Contrast enhancing lesion in cervical cord |  | | | Multiple infra and supratentorial acute and chronic demyelinating lesions fulfilling Barkhof’s criteria Segmental contrast enhancement of the CN II, III, V-X bilaterally (Figure 1a, d) | | Enlarged and contrast-enhancing spinal nerve roots, and brachial plexuses (divisions, segments, and cords), bilaterally (Figure 1g, j) |
| CSF analysis |  | |  |  | | | CSF: Protein=276 mg/dL, acellular, OCB negative | |  |
| EMG |  | |  |  | | | Severe demyelinating sensory and motor polyneuropathy | |  |
| Treatment 🡪 Response | IVPM 🡪 complete remission | | IVPM 🡪 complete remission | IVPM 🡪 no response | | | Plasma exchange  🡪 partial response | | Plasma exchange 🡪 partial response,  EDSS = 5 |
| Follow-up | Secondary progressive course during four years follow-up (Figure 1a) | | | | | | | | |
| Case II | | | | | | | | | |
| Admission & | **1** | **2** | | | **3** | **4** | | **5** | |
| Time Course | **Age: 13 y** | **2 y later** | | | **2 y later** | **6 months later** | | **2 moths later** | |
| Clinical Properties | Right sided ON | Left sided ON | | | Weakness and sensory loss on the left side & one month later on the right side | Quadriparesis (LE>UE, distal>proximal); atrophic interosseous muscles; absent DTR in lower and hypoactive DTR in upper extremities; hypoesthesia below T5 dermatome bilaterally;  loss of vibration and position sensations; diminished visual acuity and color vision in both eyes; bilateral horizontal nistagmus;  bifacial paresis; diminished gag reflex, dysphagia; bilateral dysmetria | | Paraparesis  EDSS was 8.0 again.  This relapse was attributed to CIDP | |
| MRI |  | Cranial and cervical demyelinating lesions fulfilling Barkhof’s criteria | | |  | Multiple chronic and acute demyelinating lesions and  contrast enhancing multiple cranial nerves, bilaterally  Markedly enlarged and gadolinium-enhancing cauda equina, cervical and lumbal plexuses  (Figure 1b, e, h, k) | | Partial resolution of the cranial and peripheral nerve enhancement, contrary to MS plaques which increased in number (localized at clinically irrelevant sites) | |
| CSF analysis |  |  | | |  | CSF: Protein=237 mg/dL, acellular, OCB negative | |  | |
| EMG |  |  | | |  | Severe demyelinating sensory and motor polyneuropathy | |  | |
| Treatment 🡪 Response |  | Interferon β | | | Pulse steroid + oral prednisolone🡪 no improvement | Plasma exchange 🡪 pyramidal and motor symptoms improved partially IVIG 🡪 EDSS improved from 8.0 to 5.0, NCS showed considerable improvement  Discharge: 0,4gr/kg IVIG every three weeks | | Plasma exchange + pulse steroid  🡪 able to walk without support Discharge: Plasma exchange 2/week | |
| Follow-up | During one year follow-up, patient had two more relapses. There was near complete resolution of the cranial and peripheral nerve abnormalities on repeat MRI (Figure 1b) | | | | | | | | |

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| Case III | | | | | | |
| Admission & | **1** | | **2** | | **3** | |
| Time Course | **Age: 27 y** | | **3 months later** | | **In the following 6 months** | |
| Clinical Properties | Gait difficulty and tingling in feet. Increased DTR in lower extremities | | Visual impairment in left eye, One month later in the right eye | | Quadriparesis (LE>UE, distal>proximal), normoactive DTR’s in upper, absent DTR’S in lower extremities; hypoesthesia in LE and below T7 dermatome, diminished position and absent vibration sensation in LE; diminished color vision in both eyes, bilateral dysmetria and dysdiadochokinesia, urinary and fecal incontinence | |
| MRI |  | |  | | Cranial MRI: Supratentorial multiple chronic and a few acute demyelinating lesions fulfilling Barkhof’s criteria and multiple contrast-enhancing cranial nerves Enlargement and contrast-enhancement in most spinal nerves (Figure 1c, f, i, h) | |
| CSF analysis |  | |  | | CSF: Protein=267 mg/dL, acellular, OCB negative | |
| EMG |  | |  | | Modereate demyelinating sensory and motor polyneuropathy | |
| Treatment 🡪 Response | 5 days pulse steroid 🡪 partial improvement | | 5 days pulse steroid  🡪 complete remission | | Plasma exchange  🡪 substantial improvement in motor strength  Discharged with oral prednisolone and cyclophosphamide treatment | |
| Follow-up | Almost complete resolution of gadolinium enhancement in supratentorial lesions but persistance of contrast enhancement of cranial nerves two months later (at discharge) | | | | | |
| Case IV | | | | | | |
| Admission & | **1** | **2** | | | | **3** |
| Time Course | **Age: 36 y** | **3 months later** | | | | **2 years later** |
| Clinical Properties | Mild paraparesis and generalized paresthesia | Bilateral internuclear ophtalmoplegia; mild paresis in distal LE; absent patella and ankle jerk reflexes; wide based gait | | | | Progressive moderate weakness in LE; absent vibration sensation in LE, worsening of patients symptoms were considered to be linked to progression of CIDP  Diagnosis of MS |
| MRI |  | A few chronic demyelinating lesions in cranial MRI, cranial nerves did not show contrast-enhancement  No abnormality in the peripheral nerve roots in cervical MRI | | | | New supratentorial hyperintense lesions on T2 sequences, some of which with contrast enhancement. (fulfilling Barkhof criteria, but clinically silent) |
| CSF analysis |  | CSF: Protein=27 mg/dL, acellular, OCB positive | | | |  |
| EMG |  | Diffuse demyelinating polyneuropathy with chronic axonal damage in sensory and motor nerve fibers | | | | Demyelinating features with progression of chronic axonal loss |
| Treatment 🡪 Response |  | *5 days pulse steroid*  🡪 BINO and paresis recovered | | | | Azathioprine (100mg/day) |
| Follow-up | Slowly progressive course of CIDP and to a lesser extent MS during five years follow-up | | | | | |
| Case V | | | | | | |
| Admission & | **1** | | | **2** | |  |
| Time Course | **Age: 55 y** | | | **Age 71 y** | |  |
| Clinical Properties | Mild gait problems and  glove-and-stocking paresthesia | | | Progressive and insidious course; mild to moderate quadriparesis, atrophic thenar and hyothenar muscles; absent or hypoactive DTR’s; significant loss in all of the sensory modalities, positive Romberg's test, wide based gait, could walk with support; visual and hearing loss; dysmetria and dysdiadochokinesia; memory impairment and urinary incontinence | | |
| MRI |  | | | Diffuse cervical, infra- and supratentorial non-enhancing T2 hyperintense lesions, black holes in T1 series | | |
| CSF analysis |  | | | CSF: Protein=43 mg/dL, acellular, OCB positive | | |
| EMG |  | | | Severe demyelinating sensory and motor polyneuropathy | | |
| Treatment 🡪 Response |  | | | *5 days pulse steroid*  🡪 no improvement | | |
| Follow-up | Patient lost to follow-up | | | | | |