22.2_Multiple Sclerosis & Inflammatory Diseases of the CNS

Case

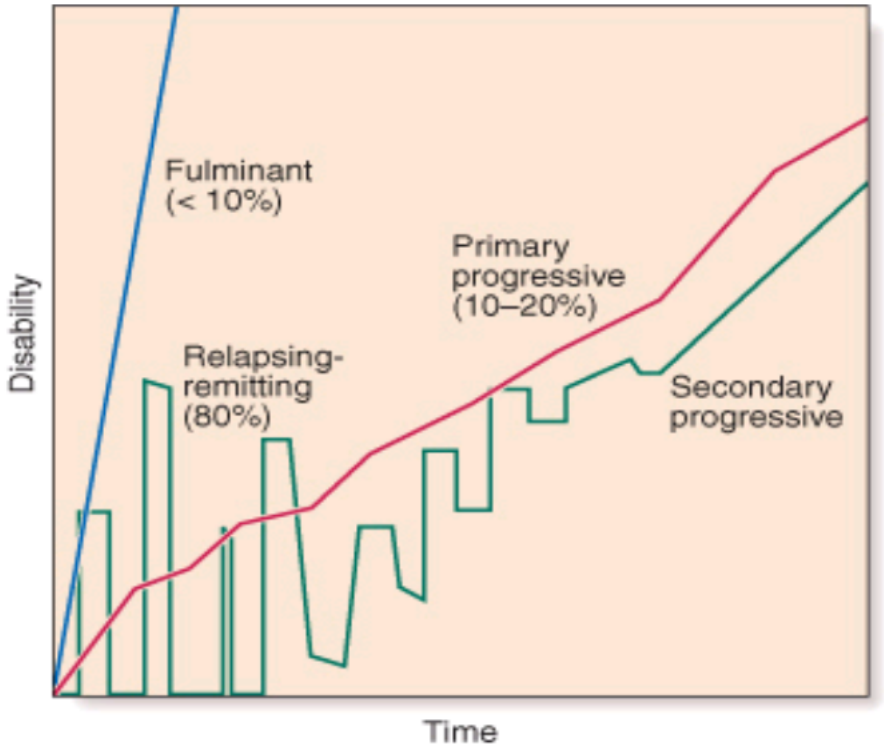
Ellen Tweedle, aged 34 years, presents with acute loss of vision in her left eye and weakness in her left hand. She has previously been well and is a non smoker.

<table>
<tr>
<td>Describe your management of Ellen in terms of history, examination and investigations.</td>
<td>Hx – Must be a HX of neurological disturbances that cannot be explained by a single lesion.
- Hx of transverse myelitis, optic neuritis in past (demyelinating lesions) that can come in attacks in years preceding Dx of MS

Ex – Full neuro (no specific tests that will show MS)

Ix – No specifics tests to Dx MS, mainly used to rule out other DDx.
B
I – MRI (rule out space occupying lesion), CXR (rule out),
M
B – B12, antiphospholipid antibodies, antinuclear antibodies (SLE)
O - CSF</td>
</tr>
<tr>
<td>Explain in a table the MacDonald criteria for the diagnosis of multiple sclerosis.</td>
<td>
<table>
<tr><th>Clinical presentation</th><th>Addition Criteria for diagnosis of MS</th></tr>
<tr><td>Two or more attacks separated in 'time' (at least 3 months apart) and 'space' (involving different parts of the CNS) with objective clinical evidence of two or more lesions</td><td>None</td></tr>
<tr><td>Two or more attacks separated in 'time' and 'space', but with objective clinical evidence for only one lesion</td><td>MRI demonstrates dissemination in 'space' (multiple lesions in several different sites)
or
Two or more MRI-detected lesions consistent with MS and oligoclonal bands in CSF
or
Await further clinical attack at different anatomical site</td></tr>
<tr><td>One attack with objective clinical evidence of two or more lesions in different parts of the CNS (i.e. dissemination in 'space')</td><td>Dissemination in 'time', demonstrated by serial MRI scans (looking for a new lesion developing at least 3 months after the initial presentation)
or
Await further (second) clinical attack at different anatomical site</td></tr>
<tr><td>One attack with clinical evidence of only one lesion (clinically isolated syndrome)</td><td>MRI demonstration of dissemination in 'space' and 'time' (as above)
or
Two or more MRI-detected lesions with CSF showing oligoclonal bands and dissemination in time, demonstrated by MRI
or
Await further (second) clinical attack at different anatomical site</td></tr>
<tr><td>Insidious neurological progression suggestive of MS</td><td>CSF positive for oligoclonal bands
and
Dissemination in 'space' and 'time' on MRI and/or abnormal VER[3]
or
Continued progression for a year</td></tr>
</table>
</td>
</tr>
<tr>
<td>How does multiple sclerosis typically present?</td>
<td>Often relapsing and remitting – comes in attacks of sensory loss that get progressively worse, debilitating the patient more and more as time goes on.

? Optic neuritis
? Relapsing and remitting sensory symptoms
? Subacute painless spinal cord lesion
? Acute brain-stem syndrome
? Subacute loss of function of upper limb (dorsal column deficit)
? 6th cranial nerve palsy</td>
</tr>
<tr>
<td>Draw, in a graph, the typical course of disability in fulminant, relapsing</td>
<td></td>
</tr>
</table>

<table>
<tr><td>and remitting multiple sclerosis.</td><td> 
</td></tr>
<tr><td>List 5 DDx of MS</td><td>Mechanical compression by tumour, abscess, aneurism
Epstein-Barr Virus
GBS
Acute Transverse Myelitis (though can be how MS presents)
Optic Neuritis (though can be how MS presents)</td></tr>
<tr><td>Explain the evidence for

1. Pulsed corticosteroids
2. Interferon beta-1a/b

in the treatment of multiple sclerosis</td><td>1. Pulsed corticosteroids (e.g. methylprednisolone or corticotrophin)

2. Interferon beta-1a/b – Get in Early and it will delay disability by 2-3 years
In people experiencing a first demyelinating event, interferon beta-1a decreases the risk of conversion to clinically definite multiple sclerosis over 2-3 years compared with placebo. In people with active relapsing-remitting multiple sclerosis, there is limited evidence that, compared with placebo, interferon beta-1a/b reduces exacerbations and disease progression over 2 years.</td></tr>
<tr><td>Describe in general terms the management of multiple sclerosis in the following categories:

Spasticity
Ataxia
Dysesthesia (like allodynia)
Bladder Symptoms,
Fatigue and Impotence</td><td>
<table>
<tr><th>Disability due to MS</th><th>Mx</th></tr>
<tr><td>Spasticity</td><td>Baclofen (muscle relaxant)
Tizanidine (a2 agonist)
Botox
Chemical Neurectomy (destroy nerve fibres causing issues)</td></tr>
<tr><td>Ataxia</td><td>Isoniazid
Clonazepam</td></tr>
<tr><td>Dysesthesia</td><td>Amitriptyline (Cymbalta)
Gabapentin (Lyrica)</td></tr>
<tr><td>Fatigue</td><td>Modafinil</td></tr>
<tr><td>Impotence</td><td>Sildenafil</td></tr>
</table>
</td></tr>
</table>