

MIELOPATI

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PENDAHULUAN

- Mielopati → istilah u/ menggambarkan setiap defisit neurologis yang berhubungan dengan sumsum tulang belakang.
- Myelopati paling sering disebabkan oleh kompresi sumsum tulang belakang oleh osteofit atau ekstrusi diskus pada vertebra servikalis.

DEFINISI

- Mielopati → defisit neurologis yang berhubungan dengan kerusakan pada sumsum tulang belakang. Mielopati dapat terjadi sebagai akibat dari proses ekstradural, intradural, atau intramedulla.

KLASIFIKASI

Table 2. Nurick's Classification

Nurick's score	Neurologic status
0	Root sign/symptoms, normal cord function
I	Cord pathology, gait intact/employed
II	Mild gait dysfunction/employed
III	Gait dysfunction/unemployed
IV	Moderate to marked gait dysfunction/ambulation with help
V	Marked gait dysfunction/wheelchair bound

Mielopati Kompresif	Mielopati non kompresif
<p>Degeneratif</p>	<p>Myelitis transversal infeksius:</p> <ul style="list-style-type: none"> -Virus: zoster, Eipstein Barr, herpes simplex, sitomegalovirus, adenovirus, enterovirus, Coxsackie B, herpes virus tipe 6, HIV dan AIDS, HTLV I and II -Bakteri : staphylococcus aureus, streptococcus, mycobacterium -Spirosit : sifilis -Jamur : Cryptococcus, aspergillus
	<p>Ensefalitis akut:</p> <ul style="list-style-type: none"> -penyakit demyelinisasi -Sklerosis multipel -Neuromyelitis optic -Penyakit Eale <p>Vaskuler:</p> <ul style="list-style-type: none"> -Trombosis arteri spinalis -Vaskulitis sistem saraf pusat
<p>Trauma:</p> <ul style="list-style-type: none"> -Lesi tulang -Herniasi diskus -Perdarahan epidural 	<p>Substansi toksik</p> <ul style="list-style-type: none"> -Arsenik, triortokresil fosfat, nitrit oksida, metotreksat -radiasi -Luka bakar listrik
<p>Infeksi (abses)</p>	<p>Degeneratif:</p> <ul style="list-style-type: none"> -Sklerosis lateral primer -Paraparesis spastik familial -Atasia spinoserebellar -Neurodegenerasi -Ataksia Friedrich
<p>Tumor :</p> <ul style="list-style-type: none"> -Extradural : benigna dan maligna -Untradural : intra dan ekstra medular 	<p>Metabolik :</p> <ul style="list-style-type: none"> -Defisiensi vitamin B12 -Defisiensi vitamin E -Penyakit hati dan ginjal kronik -Defisiensi heksosamidase
<p>Malformasi arteri vena</p>	<p>Paraneoplastik</p>

Table 1. Criteria Adopted by the Japanese Orthopaedic Association for Evaluation of the Results of the Operation for Cervical Myelopathy

I. Upper extremity function

- 0. Impossible to eat with either chopsticks or a spoon
- 1. Possible to eat with a spoon, but not with chopsticks
- 2. Possible to eat with chopsticks, but inadequately
- 3. Possible to eat with chopsticks, but awkwardly
- 4. Normal

II. Lower extremity function

- 0. Impossible to walk
- 1. Needs a cane or aid on flat ground
- 2. Needs a cane or aid only on stairs
- 3. Possible to walk without a cane or aid, but slowly
- 4. Normal

III. Sensory function

A. Upper extremity

- 0. Apparent sensory loss
- 1. Minimal sensory loss
- 2. Normal

B. Lower extremity

- 0. Apparent sensory loss
- 1. Minimal sensory loss
- 2. Normal

C. Trunk

- 0. Apparent sensory loss
- 1. Minimal sensory loss
- 2. Normal

IV. Bladder function

- 0. Complete retention
 - 1. Severe disturbance
 - (1) Inadequate evacuation of the bladder
 - (2) Straining
 - (3) Dribbling of urine
 - 2. Mild disturbance
 - (1) Urinary frequency
 - (2) Urinary hesitancy
 - 3. Normal
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Karakteristik Klinik	Central Cord Syndrome	Anterior Cord Syndrome	Brown Sequard Syndrome	Posterior Cord Syndrome
Kejadian	Sering	Jarang	Jarang	Sangat Jarang
Biomekanika	Hiperekstensi	Hiperfleksi	Penetrasi	Hiperekstensi
Motorik	Gangguan bervariasi ; jarang paralisis komplet	Sering paralisis komplet (ggn tractus descenden); biasanya bilateral	Kelemahan anggota gerak ipsilateral lesi; ggn traktus descenden (+)	Gangguan bervariasi, ggn tractus descenden ringan
Protopatik Gangguan	bervariasi tidak khas	Sering hilang total (ggn tractus ascenden); bilateral	Sering hilang total (ggn tractus ascenden) Kontralateral	Gangguan bervariasi biasanya ringan
Propioseptik	Jarang sekali terganggu	Biasanya utuh	Hilang total ipsilateral; ggn tractus ascenden	Terganggu
Perbaikan	Sering nyata dan cepat; khas kelemahan tangan dan jari menetap	Paling diantara Lainnya	Fungsi buruk, namun independensi paling Baik	NA

PEMERIKSAAN PENUNJANG

- **Pemeriksaan radiologis**

Dianjurkan melakukan pemeriksaan posisi standar (anteroposterior, lateral) untuk vertebra servikal, dan posisi ap dan lateral untuk vertebra thorakal dan lumbal.

Pada kasus-kasus yang tidak menunjukkan kelainan radiologis pd foto polos → **CT SCAN** dan **MRI** sangat dianjurkan.

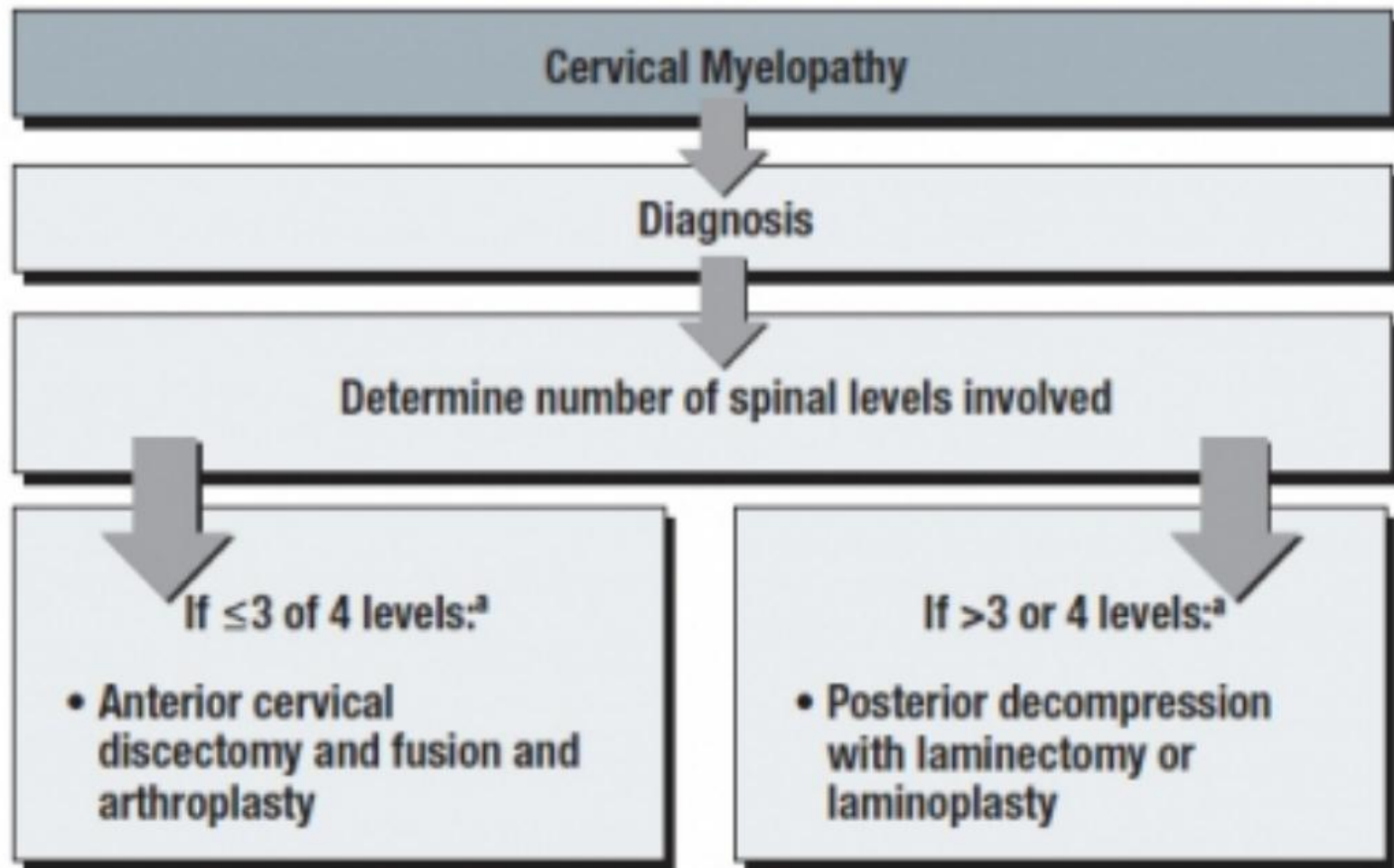
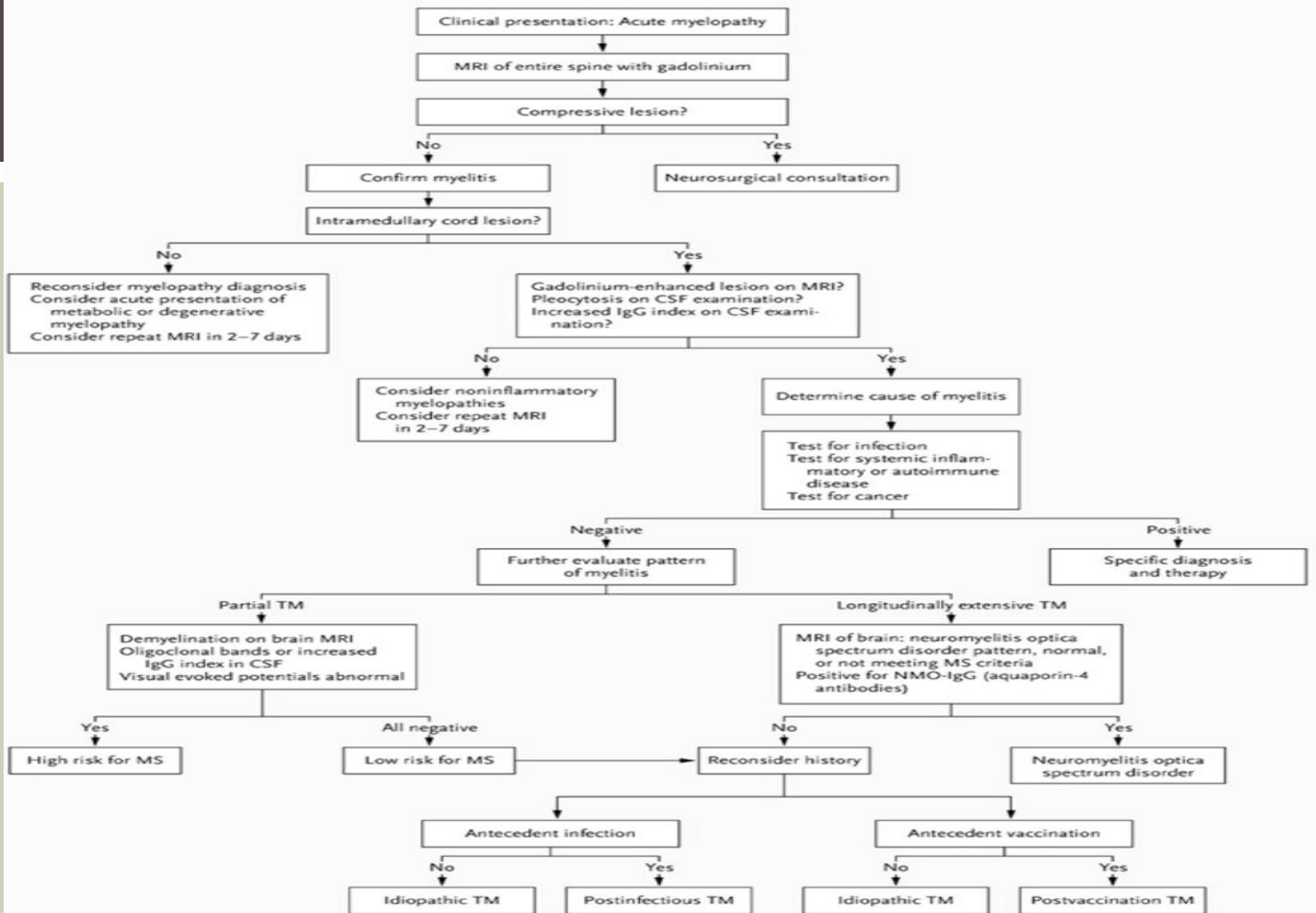


Figure 4. Treatment algorithm for cervical myelopathy.

^a Assuming normal cervical alignment and no other complicating features. If alignment is abnormal and in more complex situations, a combined anterior/posterior approach may be necessary.



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TERIMAKASIH