

Physiotherapy for chronic neck pain

Hồ Quang Hưng

Tom

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- L.V.T.N., male, 1969
- He had been a heavy manual labourer.
- He is presenting with 2 year history of neck pain associated with numbness on the medial side of forearm and middle, ring, little fingers of both arms.
- He had an operation one year ago on both hands with diagnosis of carpal tunnel syndrome but the numbness didn't changed.
- He was introduced some exercises done at home last months. Now the neck pain decreases but numbness of both hands does not ameliorate.
- The examination reveals normal ROM, hyperreflexe on arms and legs, Hoffman(+), mild weakness of adduction of ® little finger. The combination of extension and right flexion causes neck pain radiating to right forearm and last three fingers.
- On palpation, Tom remarks a stiffness of low cervical and thorax spine.

MRI



KẾT LUẬN :

- Thoái hóa cột sống cổ.
- Gai xương và thoát vị đĩa đệm (tầng C4-5 ra sau ưu thế ở cạnh trái trung tâm, chèn ép rễ thần kinh C5 trái.
- Gai xương và thoát vị đĩa đệm tầng C5-6, C6-7 ra sau # 4mm và dày dây chằng dọc sau, gây hẹp ống sống (d# 5-6mm), hẹp ngách bên và lỗ liên hợp hai bên, chèn ép tủy gây tổn thương tủy ngang mức đốt sống C5-6 và chèn ép rễ thần kinh C6, C7 hai bên.

Conclusion:

- Degeneration of cervical spine
- Spur and disc herniation (left latero-central) at C4-5 with compression on left C5
- Spur and disc herniation (central) at C5-6, C6-7 with stenosis of intervertebral holes, spinal canal and compression on bilateral C6, C7

EMG: Bilateral chronic C5C6C7

NERVE CONDUCTION						
MOTOR	Median and ulnar nerve is normal					
SENSORY	Peroneal nerve is normal					
NEEDLE EMG		Bilateral C5C6C7 reinnervation				
Muscle	Spontaneous activity			MUAPs		
	Inser	Fib	Fasc	Recruitment	Morphology	
					Ampl	Phases
First dorsal interosseous	N	N		N	N	N
Pronator (C6-C7)	↑	N		↓	↑	Polyphases
Triceps (C6-C7-C8)	↑	N		↓	↑	Polyphases
Biceps (C5-C6)	↑	N		↓	↑	Polyphases
Deltoid (C5-C6)	↑	N		↓	↑	Polyphases
Tibialis anterior	N	N		N	N	N
Gastrocnemius	N	N		N	N	N

Pathology:

- Radiculopathy
- Myelopathy

Clinical sign:

- Neck pain
- Finger numbness



Goal of physical therapy

1. To relieve neck pain.
2. To alleviate numbness in 4th and 5th fingers of both hands.
3. To improve stability of cervical spine.

Physiotherapy Program

- Exercises for the muscles of the neck, with the aim of improving stability of cervical spine.
- Mobilizations of cervical spine, with the aim of relieving pain, removing stiffness and improving flexibility.

Exercises

- Neck Flexion/Extension exercises. Improving strength of trapezius and sternocleidomastoid muscles.
- Deep Neck Flexors exercises. “Chin-Tucks”. These deeper muscles surround the cervical vertebrae more intimately – strengthening these muscles will provide much better support than that of the larger flexors and extensors.

Mobilizations

- Due to the degenerative nature of this patient's condition and potential instability of the neck, I feel the most appropriate mobilization to perform is a longitudinal traction movement.
- I would also combine this traction with physiological movements such as flexion, extension and rotation to aid flexibility.