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Neck Pain

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This topic at first look appears vague and nebulous. But on closer look it is a problem one faces every day. It is broadbased and envisages a variety of ailments starting from very insignificant lesions to very morbid diseases. The topic thus merits detailed consideration so that all angles are well discussed and differential diagnosis would become feasible. Any difficult problem often is referred to as a "Sore in the neck" or "sore neck". The very fact that a problem is difficult, makes one ponder. Unconscious movements of neck, as well as spasm of neck muscles give a discomfort in the neck. Adopting a particular posture for a long time also gives rise to pain in the neck, as driving long distances.

It is curious to note that from the adoption of postures and attitudes an individual develops a characteristic neck posture. According to "Lakshana Sastras" it is possible even to characterise an individual and predict his/her attitudes from the adoption of neck postures. One can encounter such situations time and again in day to day life.

Important persons, persons feigning greatness etc. have a stiff neck and walk with the chin in the air. Smiling wryly with a tilt of neck would express sarcasm. Feeble minded people and those during periods of disappointment develop a floppy neck. People changing allegiance "crossing the floor" etc. have wobbling necks. This is particularly true of opportunities. Again those expressing humility or submission have flexed necks.

At this juncture one should remember that adoption of such postures unconsciously would give rise to neck pain. But it is also possible that due to diseases neck pain may occur making the sufferer assume such positions. I propose to discuss here the aetiology and differential diagnosis of neck pain.

Pain sensitive structures in the neck

Pain fibres arborising in -.
(a) muscle planes
(b) supplying intervetebral joints
(c) on disc surface
(d) on posterior longitudinal ligament
(e) cervical dura
(f) major nerve roots of cervico-brachial plexus

Pain is uncomfortable and often intolerable. However pain is a protective phenomenon. It warns the sufferer about the graver underlying problems. Just pain killers are likely to give temporary relief, but the basic factor responsible for pain should not go unbridled.

So neck pain could be -.
(A) local or regional pain
(B) radiating root pain

(C) diffuse burning tract pain
(D) referred pain due to disease elsewhere in the body.

Any form of local pain could be originating in the muscle, tendons, ligaments or bone. Local pain due to whatever cause produce muscle spasm which in turn gives rise to additional pain, thus setting up a vicious cycle. With severe pain and grave problems in the cervical spine a patient seems to come into OPD "carrying his head in his hands". Watch out for such situations and make correct diagnosis.

A.

Local Pain

Common neck pains

1 . **Soft tissue lesion**

Very often patient wakes up with a "catch" in the neck. This is due to adoption of incorrect postures during sleep. This is particularly true for alcoholics and drug addicts. Many students adopt incorrect postures for reading and writing. In school days correct posturing, neck exercises and relaxing movements should be taught to the students. Any manual labourer or skilled worker also should be informed about correct posturing and neck exercise particularly when they seek medical advice.

Another peculiar habit with some people is to "crack the neck" to get the clicking sound in the joint. If they get the sound they feel happy. If not they keep on doing odd movements of the neck till they get the sound. This practice should be stopped or else they can get severe neck pain as well as disc disease.

Neck lateral flexion is another movement which is frequently done among Indians and orientals. Nodding "yes" movements and rotating "no" movements are seen amongst most races. Side to side lateral flexion "yes" movements are peculiar among Indians. Carrying it too far may give rise to neck pain. Head load workers are also common among orientals. So while looking at the aetiology of neck pain these factors also must be considered.

Cervical lymphadentis, thyroiditis, foreign body in oesophagus, laryngopharyngitis, local tumours benign or malignant involving nerve roots could give rise to varying degrees of pain.

Hence in a wide variety of conditions giving rise to local pain shall be thought of in arriving at a correct diagnosis.

2. **Skeletal lesions**

a) Acute lesions -.
  (A) Occurring de novo,
  (B) On pre-existant abnormalities.
(b) Sub-acute lesions
(c) Chronic lesions.

Acute lesions occurring De Novo

(a) Fractures of cervical vertebrae,
(b) Sub-luxations,
(c) Disc prolapse,

(d) Haematorrhachis, and
(f) Acute radiculitis are the frequent problems. For details on these lesions the reader should refer to available publications and text books. These vertebral lesions could occur as such or with associated neurological deficits.

Acute lesions occurring on pre-existant lesions

Pre-existant lesions congenital or acquired may be silent. Some minor trauma could precipitate neurological deficit and then the lesions are diagnosed. The pre-existing lesions could be manifesting with neck pain, or torticollis, which might have been ignored earlier.
(a) Occipitalisation of atlas,
(b) Vertebralisation of occipit,
(c) Agenetic or hypogenetic odontoid,
(d) Atlanto axial subluxations,
(e) Foreman magnum anomalies,
(f) Canal atenosis,
(g) Klippel feil anamolly,
(h) Caries, spine
(i) Vascular anomalies,
(k) Metabolic and degenerative disorders, and
(l) Neuralgias.

Subacute lesions

Disease process manifests subacutely with root pains, or local pains or with both :.
(a) Disc prolapse
(b) Haematorrhachis
(c) Radiculitis
d) Neuralgias
- Non-specific
- Post-herpetic

e) Caries spine -
1. with or without cold abscess
2. with or without neurological deficits
3. with or without dysphagia

f) Tumours -
1. Extraspinal eroding into vertebrae (Primary and Secondaries)

2.Spinal - bony tumours

Extradural - Soft tissue tumours

Intradural - Extramedullary

- Intramedullary.

Chronic lesions

(a) Repeated trauma

(b) Spondylosis
(c) Fluorosis
(d) Infectious - non-specific - pyogenic - tuberculous.
e) Arthritis and Arthropathies -
Osteoarthritis
Rheumatoid
Gout
f) Tumours
- Primary
- Secondary
g) Metabolic disorders -
Diabetes mellitus
Alcaptonuria
Ochronosis
Osteomalacia

Neck pain unassociated with local disease

1. Systemic diseases -
Viral fever
Rheumatic fever
Blood dyscrasias
2. Subarachnoid haemorrhage - Meningism manifests with severe neck pain
3. Tonsillar herniation
Any intracranial space occupying lesion with impending herniation manifests with neck pain.
4. Occipital and vertebral artery migraine.
Throbbing neck pain and visual phenomena are characteristics.
5. Parkinsonism, and other extra pyramidal disorders.
Rigidity of parkinsonism may involve the neck muscles first. The neck pain that is associated may be a very early symptom. No doubt Torticollis and dystonias would manifest with neck pain.

Referred pains

1. **Cardiogenic pain**

Myocardial ischaemia produces severe pain and it may be referred to neck and shoulder. This may occur in the acute phase. In the recovery phase it can again manifests with "shoulder hand syndrome"

2.**Irritation to diaphragm**

Basal pleurisy, hepatic disorders, cholycystitis and abdominal visceral problems irritating the diaphragmatic peritoneum may manifest with neck pain. Diaphragm being supplied by C 3.4.5.

segments, pain would be referred to the neck.

3.**Thoracic outlet syndromes**

Here also due to irritation of phrenic nerve or due to irritation of nerve roots of brachial plexus, neck pain may result.

Conclusion

From the overview that has been just presented, the attending physician should be aware of all these conditions. Correct diagnosis should be arrived at, so that efficient treatment would be possible. Management of the impressive list of conditions enumerated herein is beyond the scope of this paper. The succeeding papers, I am sure would throw a lot of information on management.