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EVALUATION OF CHRONIC NECK PAIN IN ORTHOPEDICS AND TRAUMATOLOGY CLINIC

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ABSTRACT

Objective: Evaluating the management in patients with chronic and non-spesific neck pain.

Materials and method: Questionnaire based retrospective clinical study

Results: In the previous year forty-six percent visited the general practice (GP) for neck pain. These patients , 28% did not receive a diagnostic modality, 36% did not receive therapy and 36% were not referred. The most diagnostic and therapeutic modalities were physical examination (54%) and pain medication (64%), respectively. The GPs most frequently referred to a physiotheraphy and rehabilitation (52%).

Conclusion: Administration to hospital to chronic neck pain is % 46. This percentage is a minor group among chronic neck pain. Fifty-four percent of these patients can be diagnosed, if appropriate evaluations are made.

Key Words: Chronic neck pain, evaluation, questionnaire.

Level of evidence: Retrospective clinical study, Level III.

INTRODUCTION

Musculoskeletal disorders are common cause of administration to hospital. Neck pain is one of the most common region of pain. Prevelance of neck pain is reported as 9.5 % – 35 % [5,13]. In postmenopausal women who are 50-59 years, prevalence is %10-15 [12]. According to Lamberts H., the prevalence of neck pain has been estimated as 18 per 1000 registered patients per year [11].

Neck pain is not a medical emergency, but complaints of pain and stiffness affect patients daily-routine. It causes absence for work. In some industries it even accounts for as many absences as low-back pain [14]. Pain may arise from different structures of neck. These include the intervertebral discs and annuli, ligaments, muscles, facet joints, dura and nerve roots [3]. The cause of pain may also be too variable. Neck pain may cause from infections, congenital disorders, trauma (especially motor vehicle accidents) tumours, and inflammation. Despite all clinical evaluations, no underlying pathology can be established and considered as 'non-specific neck pain' in many patients. In these cases, radiologic abnormalities are usually absent or occur in lower frequency as among subjects without complaints [2].

For neck pain, studies on efficacy of therapeutic interventions are largely lacking [1,18]. Due to lack of consensus among practitioners, the management of neck pain is greatly divergent [17]. In general, there is a broad spectrum of diagnostic procedures available for neck pain patients: plane radiographs, tomography, computed tomography (CT) scans, magnetic resonance imaging (MRI), electromyogram (EMG), etc [18].

In chronic patients who cannot be diagnosed and suffer from neck pain during few weeks, there is not a convention on which diagnostic procedures and therapeutic interventions should be applied. In the literature pain is often classified as acute (0 – 6 weeks), sub-acute (6 weeks– 3 months)

and chronic (>3 months) [13]. The aim of this study is to evaluate the diagnostic procedures in chronic and non-specific neck pain.

MATERIALS AND METHODS

Patients:

A sample of 542 patients were taken from the University Hospital. Patients were included in our study based on the following criteria:

1) Neck symptoms/complaints (excluding headache) or syndromes of cervical spine, 2) age 18-70 years, 3) symptoms had to be present for at least 6 months before administration. Exclusion criterias were specified following pathologies: fractures, infection, tumours, inflammatory disorders and osteoporosis.

Procedure

A questionnaire applied to selected patients.

Questionnaires

The questionnaire contained diagnosis, frequency of visits, diagnostic techniques, therapeutic interventions. The patients' questionnaire contained regarding patient characteristics, pain intensity, sickness related to work and visits to medical specialists/paramedical therapists. The severity of the neck pain was measured on an 11-point ordinal scale, ranging from 0 (no pain) to 10 (unbearable pain).

Statistics

Statistics were used to present the frequencies of diagnostic and therapeutic interventions and referrals. All patient characteristics were described by median and quartiles since most of the variables were asymmetrically distributed. Differences characteristics between responders and non-responders were assessed by a Mann–Whitney U test. The difference in mean age was assessed by a t-test. Comparison of sex in both groups was made by means of a chi-square test.

RESULTS

Initially a sample of 763 patients was taken from the University database. Thirty-six patients were excluded because they had symptoms for less than 6 months and 185 patients were under 18 or over 70 years of age. Due to a lack of time, two GPs filled out questionnaires for only a random sample of patients. Of these 542 patients, 286 (52.7 %) returned the questionnaire.

GPs were asked to fill out questionnaires for all 542 included patients. The GPs returned 486 (89,6 %), questionnaires (regarding 254 responders and 232 non-responders).

Patient characteristics

The responders and non-responders were compared for demographic and descriptive characteristics (Table-1).

The mean age for the responders was 50 years (median 51). The mean severity of pain was 4.8 (SD 2.6). Sixty-four percent of the responders appeared to be women. Twenty-six percent had private insurance and 74% had public insurance. Seventy-six per cent of the responders reported neck pain radiating towards other parts of the body. In 70 % the pain radiated towards the head. In 36% the pain radiated below the elbow, which could indicate neurologic abnormalities. According to 20% of the responders, the cause of their symptoms was unknown. The most frequently reported causes were ascribed to working conditions (32 %), tension: stress (26 %) and a poor posture (21 %).

Table-1. Comparison of demographic and descriptive characteristics for responding and non-responding patients

	Responders (n_254)	Non-responders (n_232)	p-value2
Age	52 (41–60)	56 (44–62)	0.006
First onset of pain ever (years ago)	6 (2–8)	7 (3–9)	0.012
GP visits previous year (all diagnosis)	5 (2–8)	5 (2–8)	0.486
GP visits previous year (neck)	0 (0–1)	0 (0–1)	0.015
Male (%)	42	44	
Female (%)	60	58	0.442

Diagnosis, therapy and referrals

During the previous year, 52% of our cohort did not visit their GP for neck pain. 24 % visited their GP for neck pain once and 24% visited their GP two or more times. The frequencies of the different modalities and referrals are reported for the total cohort and for the number of patients who visited their GP at least once for neck pain in the previous year (Tables-2,3 and 4).

The frequencies of the different diagnostic modalities used by the GPs are reported in Table II. Of the patients who did visit their GP in the previous year, 30 % did not receive a diagnostic modality. 68 % of all diagnostic modalities consisted of physical examination. The therapeutic modalities advised or applied by the GPs are reported in Table 3. Of the patients who did visit their GP in the previous year, 33 % did not receive therapy. 60 % of all advised or applied therapeutic modalities consisted of pain medication, including NSAIDs. The GPs most frequently referred to a physiotherapy and rehabilitation (52 %).

Table-2. Diagnostic modalities used in patients with chronic non-specific neck pain in general practice during the previous year.

	Patients with GP consultation (n_210)		Total population (n_486)	
	n1	%2	n1	%2
No diagnostic modalities	60	28.5	324	66.6
Physical examination	132	62,8	134	27,5
Laboratory examinations	14	6,6	16	3
X-ray	28	13,3	28	5,7
Other imaging techniques: CT, MRI, myelography, discography	4	1,94	0,8	

Table-3. Therapeutic modalities advised or applied by the GPs in patients with chronic non-specific neck pain in general practice during the previous year

	Patients with GP consultation (n_210)		Total population (n_486)	
	n1	%2	n1	%2
No therapy	65	30,9	300	61,7
Heat application	36	17	36	7,4
Rest	22	11,8	22	5
Paracetamol, aspirin: NSAIDs	180	85,7	180	37
Benzodiazepines	22	10,4	22	4,5
Antidepressants	7	3,3	7	1,4
Postural advice	36	17	36	7,4
Collar	11	5	11	2,2
Other: ointment, injection, orthopedic pillow	6	3	6	1,2

Table-4. Visits: referrals to medical specialists and paramedical therapists in patients with chronic non-specific neck pain in general practice during the previous year

Patients General practitioners		
	Total population (n_486)	Patients with GP consultation (n_210)
	%4	%4
No referral	62	38
Physiotherapy and rehabilitation	24	52
Orthopedic surgeon	11	7
Neurologist: neurologic surgeon	18	8
Rheumatologist	1	1

DISCUSSION

The results should be evaluated in two parts. First is the information on diagnostic procedures and therapy. This information was obtained from the questionnaires Second is the information of the complaints. Since these informations are based on questionnaires, there might be bias in responses and may not be objective.

Datas were not enough to study on acute phase because patients were administrated in chronic phase. Since the onset of pain started more than 5 years, the evaluation of pain would not be accurate. Compared to the study of Van Tulder et al. [16] some differences in the number of visits between patients with neck pain (46 %) and low-back pain (82 %) appeared. Since the patients evaluate their neck pain less sufferable than low-back pain, it is accountable for patient to administer less than low back pain. There are some differences between managing the neck pain versus low-back pain.

One example is the contradiction between neck and low-back patients in plain radiography. The frequency of using diagnostic imaging in patients with neck pain compared to low-back pain is lower because the incidence of herniated cervical discs (5.5 / 100000 / year) is much lower than the incidence of herniated lumbar discs (5 / 1000 / year) [7-9]. Compared with other major reasons of disability and pain, there are relatively few randomized controlled trials to guide treatment of neck pain and the guidelines for neck pain are often extrapolated from those for other conditions.

Clinical trials planned to define comparative effectiveness and efficacy are needed for all types of treatments but especially adjuvants for neuropathic pain and surgery for mechanical pain. Biological agents such as stem cell therapy, nerve growth factor and cytokine inhibitors have been studied to use in chronic low back pain, but such a study has not been conducted for neck pain. The focus should be on assessing the efficacy of these agents in neck pain in future studies. The continuity of neck pain after spinal injury and other types of injuries poses significant psychological, physical and economic results for patient and the community. There is a weak correlation between symptoms and imaging abnormalities in injured patients with chronic neck pain [6]. Finding ways to determine the risk factors leading to the development of chronic neck pain and preventing it, represents a significant challenge to the medical community.

It is understood that, only % 46 of the patients administer to physician for chronic neck pain. 54 % of the patients can be diagnosed who have chronic neck pain. 44 % percent of the patients did not receive a therapeutic modality. Compared to the study of Kuijper et al.[10] randomized study of patients with acute cervical radiculopathy, both use of hard collar and physical therapy accompanied by home exercises produced greater reduction in neck pain and disability than wait and see approach. In a randomized study comparing physical therapy, hard cervical collar immobilization and anterior decompression and fusion with cervical radiculopathy, Persson et al.[15] found greater reductions in pain the surgical group than in the others. One year fallow-up favoring surgery differences were for a lot of part no longer statistically significant. Physical examination and history can provide important clues as to whether the pain is mechanical or neuropathic and are specifying who benefit from advanced further diagnostic might develop or advanced imaging [6]. Our results are consisted with literature [4].

In this study, obtaining information on acute neck pain was not possible. Future studies should be made to evaluate acute cases to prevent patients to be chronic.

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