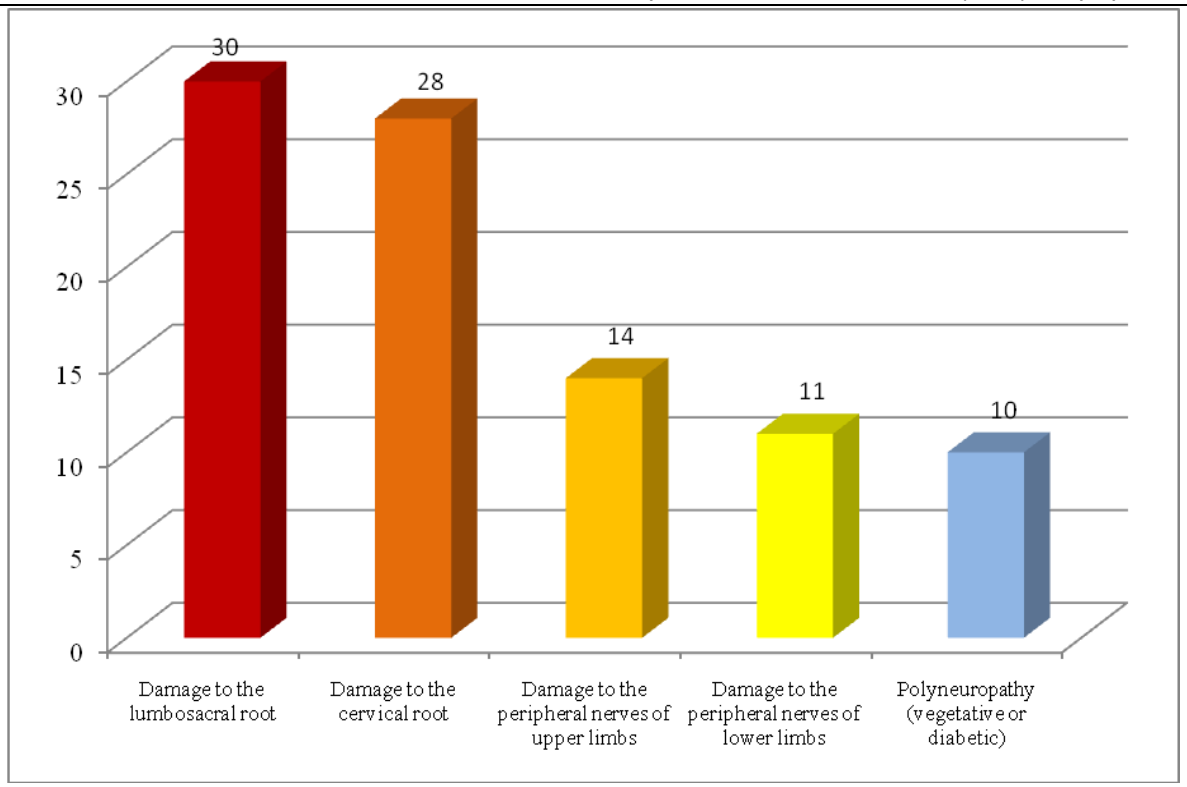

Figure 11. Distribution of persons by diagnoses

CONCLUSION

1. Women are predominantly affected by peripheral nervous system injuries when working under surge conditions.
2. Under conditions of forced sitting position, women work predominantly than men.
3. Peripheral nervous system disorders, associated with a strain, are characteristic of a large number of occupations in many industries.
4. The disabilities are typical of workers over 50 years of age and with long working lives. It is likely that age degenerative and hormonal changes are important.
5. It is likely to have household reasons such as domestic and agricultural work, as a significant part of the persons are women and live in a village.
6. Leading peripheral nerve damage, associated with a strain in the work, is damage to the lumbosacral and cervical root, followed by damage to the peripheral nerves of the limbs and polyneuropathy.

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PHYSIOTHERAPY OF OCCUPATIONALLY RELATED UPPER LIMB DISEASES

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ABSTRACT

The aim of the study is to present the results of physical treatment in patients with occupationally related upper limb diseases.

The object of the examination are 45 persons, hospitalized in the Department of Occupational diseases, University Hospital – Pleven, in the period 2015 – 2018.

Clinical, laboratory, electromyography and imaging diagnostic methods have been used. Physical treatment was conducted.

The results of the study show a positive effect of the applied physiotherapy in patients.

Key words: occupational diseases, physiotherapy, upper limb diseases.

BACKGROUND

During recent years, the number of patients with occupational diseases has been increasing. High intensity manual labour characterized by monotonous repetitive movements of the upper limbs is required in many different professions. These movements cause distrophic and degenerative damage to the muscles, tendons, ligaments and insertions on one hand, and on the other hand they also lead to systematic overload and damage of the structures of the peripheral nervous system. [1,2]

The subject of this research is the therapeutic approach for patients that are diagnosed with upper limbs diseases caused by strain in the work.

The physiotherapy treatment consists of paraffin treatment, therapeutic massage: either locally or in the form of a massage collar when cerviko-arthrosis is present; electrophoresis with nivalin on a modified collar of Sterbac, localized ultrasound therapy in the area of the carpal tunnel with NAFD and efectrostimulations of the muscles which are inanimate due to the affected median nerve. [3, 4, 5]

METHODS

Object of the examination are 45 patients (33 female and 12 male aged 28 to 60), who were admitted in the Department of Occupational Diseases in University Hospital Pleven in a time period from 2015 to 2018. The patients were treated collaboratively with the Physical and Rehabilitation clinic. Clinical, laboratory, electrophysiological and imaging diagnostic methods were applied on the day of the patients' admission into the hospital and on the 30th day after their release. Physical treatment was conducted. Data was processed with software packages Statgraphics Pro for Windows and MS Excel 2007.

RESULTS

The investigation included 45 persons, employed in industry. The following characteristics were considered: ***Sex*** 12 persons are men and 33 are women.

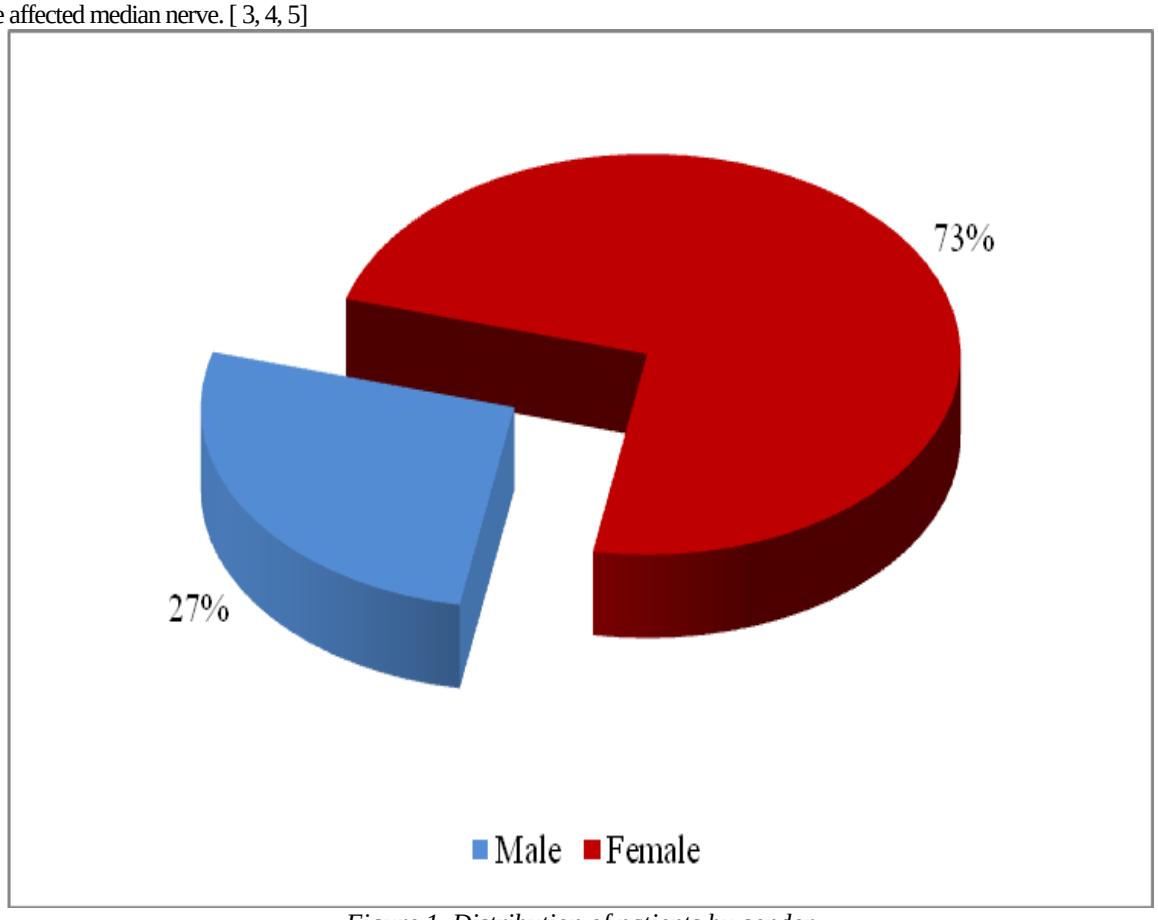


Figure 1. Distribution of patients by gender

Age 40% of people are aged between 51 and 60, 35,56 % between 41 and 50. No persons younger than 31 years old. Average age (n = 45) 45,73 ± 8,28 years.

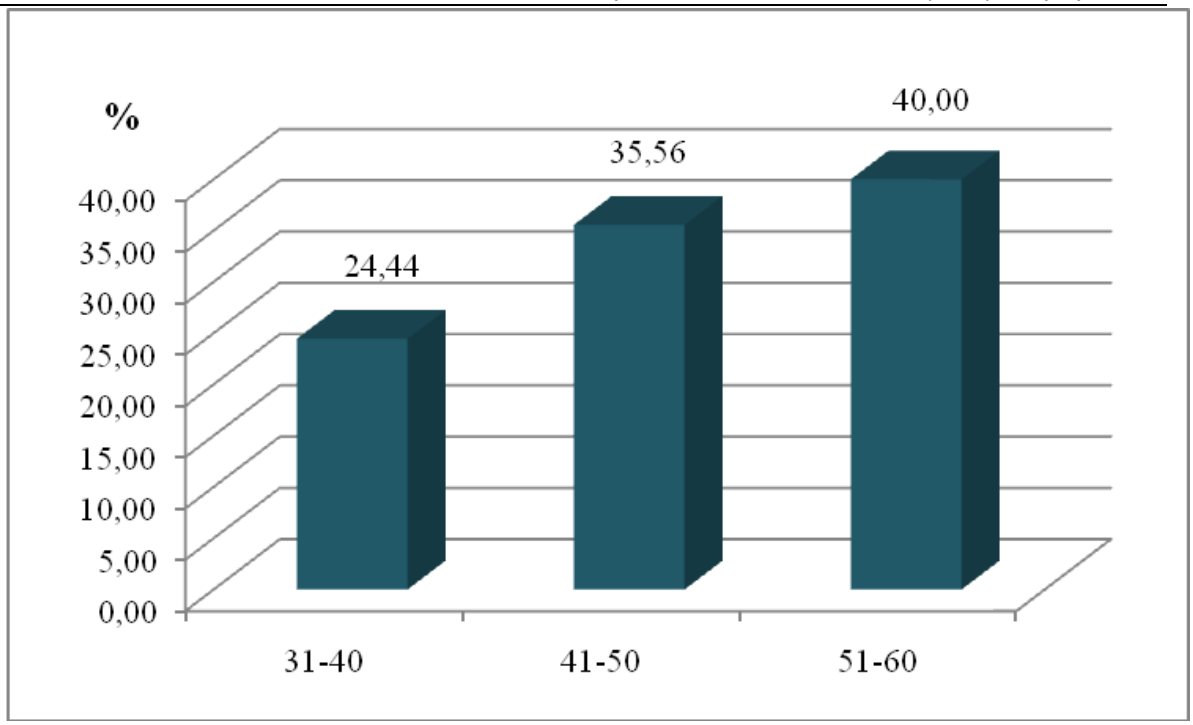


Figure 2. Distribution of persons by age

Occupation

The patients are employed in 12 professions, in 6 industries of manufacturing. The employed in the sewing industry predominate with 36%, followed by those, employed in food industry. At least the people surveyed work in the services.

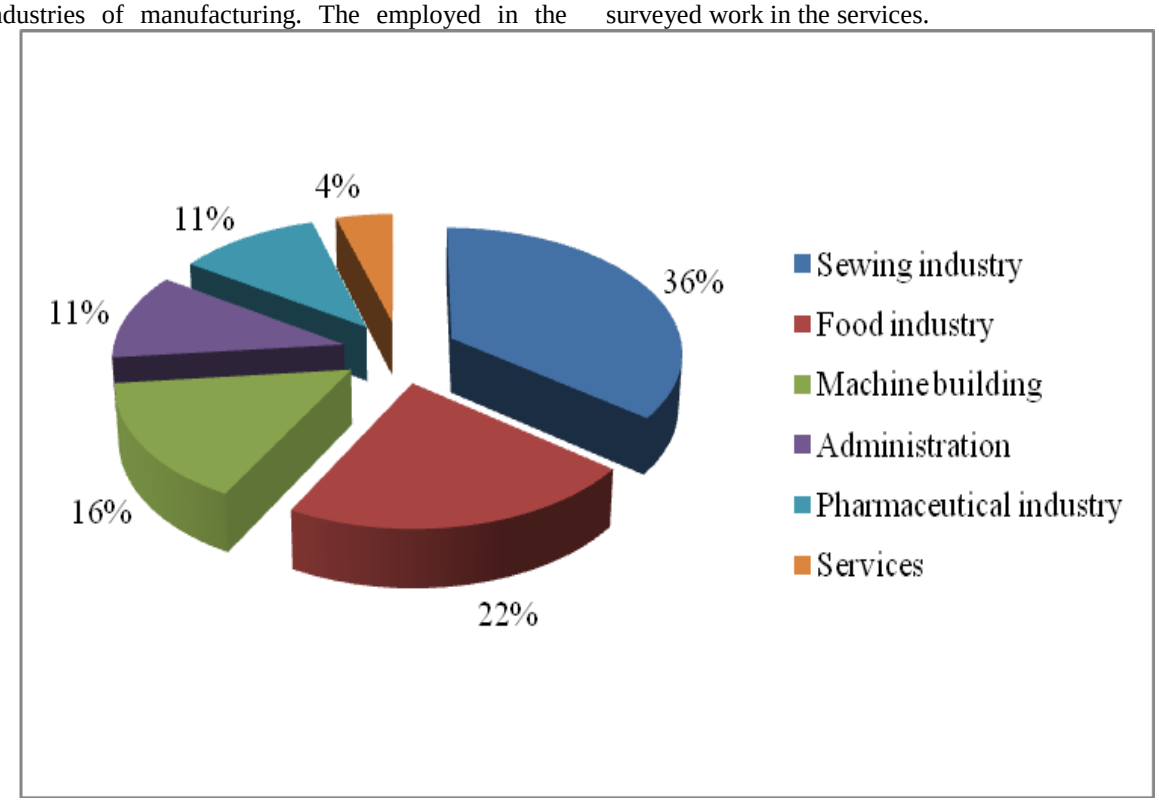


Figure 3. Distribution of persons by occupation

Exposition Most are the cases of the group with 21 to 25 years of length of service – 28,89%. Average of length of service (n = 45) 19,58 ± 7,63 years.

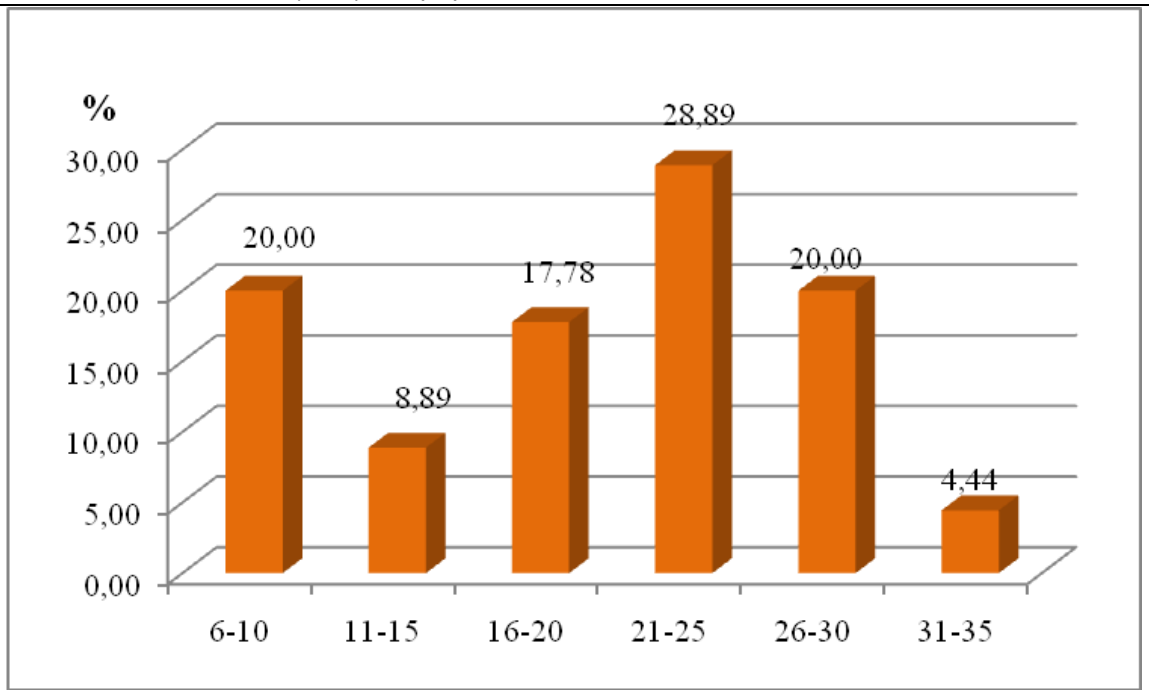


Figure 4. Distribution of patients by length of service

Subjective complaints

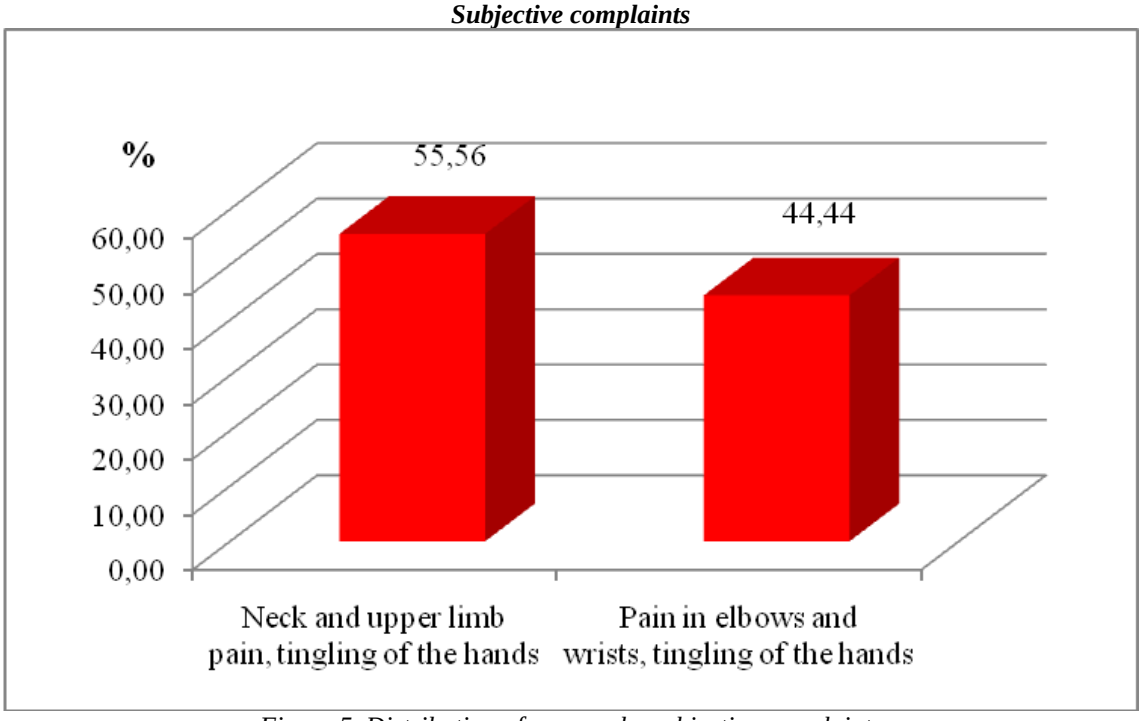


Figure 5. Distribution of persons by subjective complaints

Neurological status

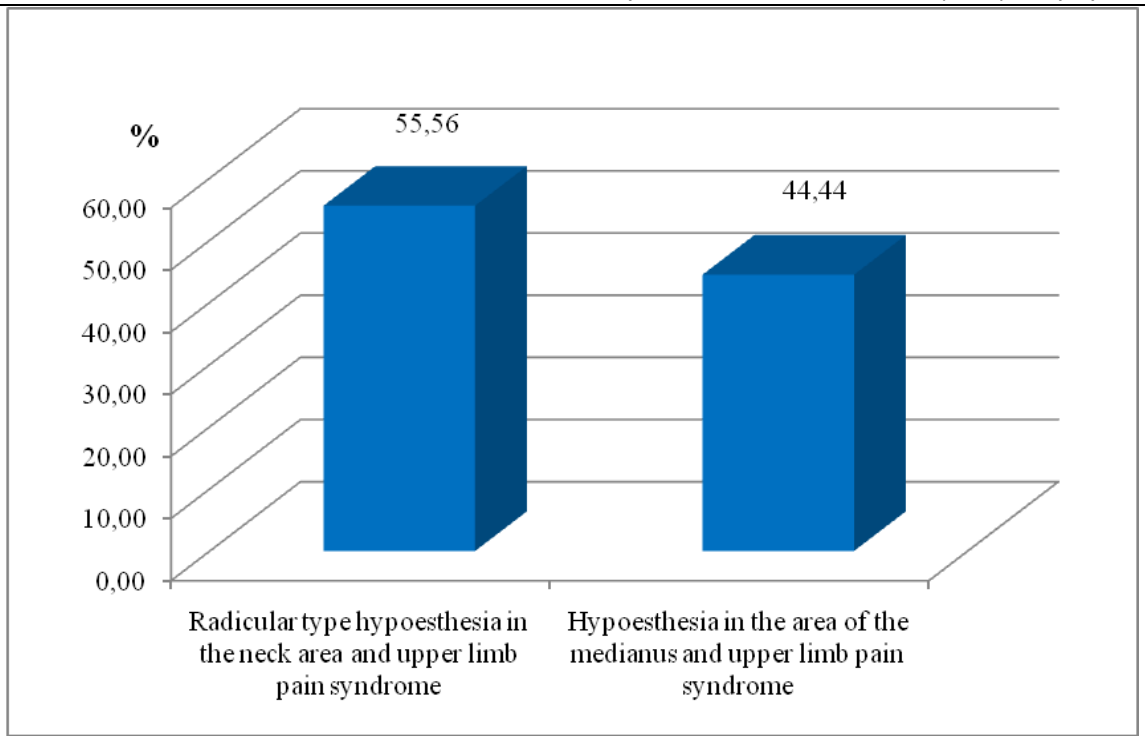


Figure 6. Distribution of patients by neurological status

Imaging

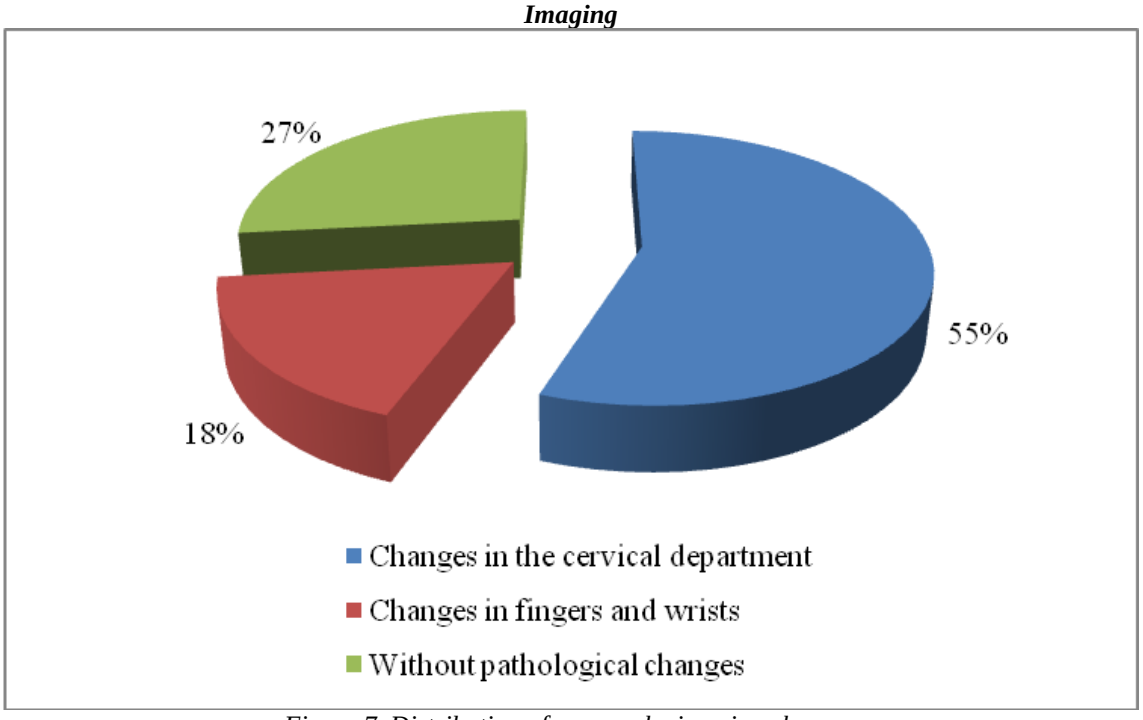


Figure 7. Distribution of persons by imaging changes

EMG (Electromyography)

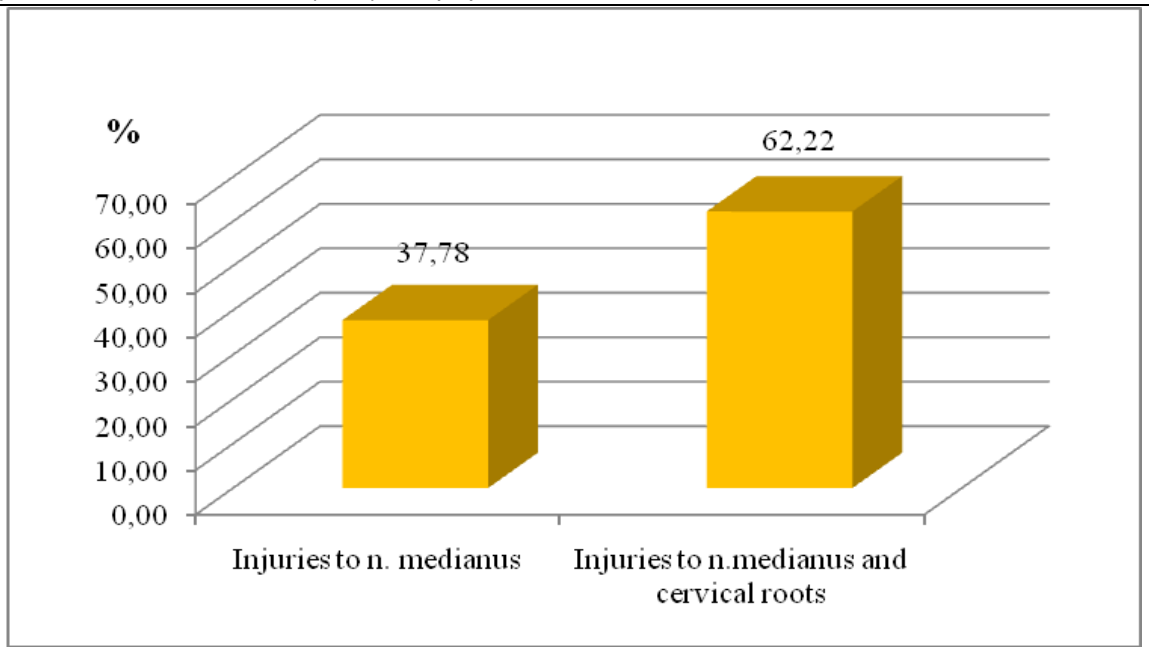
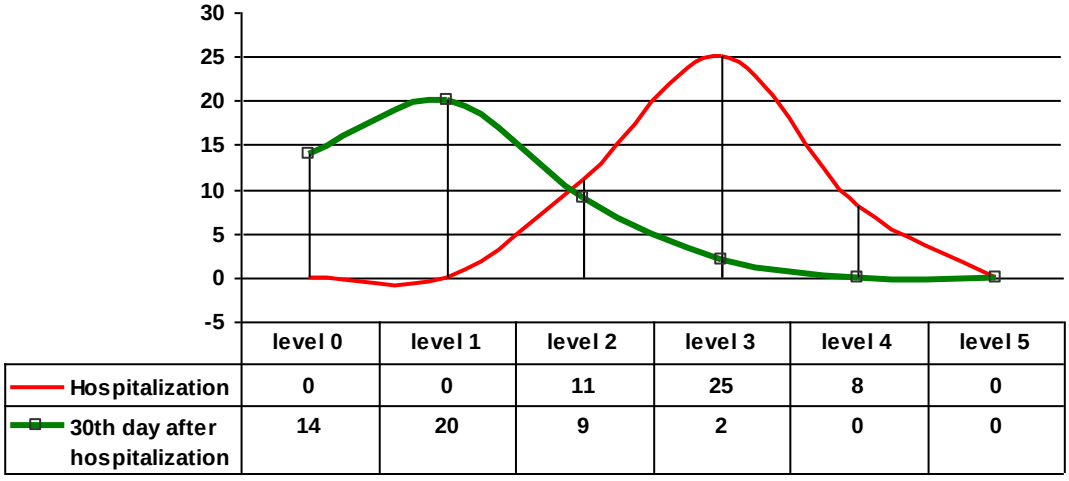


Figure 8. Distribution of patients by EMG results

Treatment results



	level 0	level 1	level 2	level 3	level 4	level 5
Hospitalization	0	0	11	25	8	0
30th day after hospitalization	14	20	9	2	0	0

Figure 9. Wilcoxon rank test

There was applied the Wilcoxon rank test to analyze the progress in degree of pain at two control occasions: on admission to hospital and on day 30 after discharge. The Wilcoxon curve presents the results obtained by assessment of pain degrees at the beginning and day 30 after treatment. The shift in the Wilcoxon curve demonstrated a noteworthy improvement in the status and degree of independence of the patients.

CONCLUSION

1. The damage to n. medianus in the carpal canal area is a current health problem and affects workers in many industries.

2. The damage involved du to overvoltage work is often combined with other injuries to the musculoskeletal system and the peripheral nervous system of the upper limbs.

3. The applied physiotherapy results in a significant improvement in the condition of the patients.

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