PRODUCTION RISK FACTORS AND SPINE INJURIES IN GARMENT WORKERS

Irena Stoilova¹, Stela Georgieva², Penka Kostadinova²
1) Department of Hygiene Medical Ecology, Occupational Diseases and Disaster Medicine, Faculty of Public Health, Medical University - Pleven, Bulgaria.
2) Department of Social Medicine and Health Management, Faculty of Public Health, Medical University - Pleven, Bulgaria.

ABSTRACT:
Garment workers are exposed to various factors in the work environment, classified as physical and ergonomic. Occupational injuries of the spine develop as a result of the action of harmful production factors, the most important of which are overstrain, vibrations and an unfavorable production microclimate. The aim of the study is to improve the health and prevention of spine injuries among garment workers. The subject of the study is 75 cases of spine injuries in garment workers. The persons were hospitalized in University Hospital - Pleven during the period 2019-2023. Clinical, laboratory, functional, imaging and statistical research methods were used. Treatment with medication and physical factors was carried out. In 93% of the patients, an improvement in clinical syndromes and the performance of activities of daily living was found. 7% of the examined persons required surgical treatment. Conclusions: Spinal injuries are a current health problem among garment workers. Combined medication and physical therapy is an effective and practically applicable therapeutic approach for the investigated disabilities.

Keywords: occupational diseases, spine, garment industry.
The age distribution was from 26 to 63 years, with a mean age of 50.47 ± 6.22 years (n=75) (fig. 2).

The distribution of the examined persons by nosological units includes: Injuries in the cervical spine (cervical spondylosis with radiculopathy, cervical non-vertebral radiculopathy, cervical osteochondrosis with radiculopathy, cervicalgia).

Damage to the lumbar and lumbo-sacral spine (damage to the intervertebral discs in the lumbar or lumbo-sacral region with radiculopathy, lumbar or lumbo-sacral non-vertebral radiculopathy, lumbago).

The distribution by nosological units is presented in fig. 5.

The following treatment was performed in the studied patients (fig. 6):

All patients were treated with physical factors - paraffin, lye, heating, massage, magnetic field, extension therapy, electrophoresis, IHR, interference currents, ultrasound with NSAIDs.

At discharge and on the 30th day after discharge, a clinical examination of the persons and a direct individual survey were carried out.

Treatment results

Improvement was reported in 70 cases, and 5 of the patients had no significant change in condition. They are referred for additional consultations and tests to clarify the diagnosis (fig. 7).
Statistical analysis was performed using a non-parametric Wilcoxon rank test for the development of the ability to perform activities of daily living (ADL) for three control points - admission, discharge and control examination on the 30th day (fig. 8). The Wilcoxon curve represents the results of ADL at baseline, at the end of treatment and at day 30 after discharge. A shift of the Wilcoxon curve to the right is an indicator of a significant improvement in the patient’s condition and independence.

**CONCLUSIONS**

- Spinal injuries are a current health problem among garment workers.
- Combined medication and physical therapy is an effective and practical therapeutic approach for the investigated disabilities.

**REFERENCES:**

1. Lillypet S, Jain T, Joseph B. Health problems among garment factory workers: A narrative literature review. *J Occup Health Epidemiol.* 2017 Spring;6(2):114-121. [Crossref]
4. Das B. Effects of Awkward Posture on Work-Related Musculoskeletal Disorders (WMSDs) among Sawmill Workers in India. *J Occup Health Epidemiol.* 2020 Summer;9(3):158-166. [Crossref]
5. Freise M, Seuring S. Social and environmental risk management in supply chains: a survey in the clothing industry. *Logist Res.* 2015; 8:2. [Crossref]


12. Madzharova RP, Simeonov EB. Clinical experience in the application of radial shockwave and kinesio taping to patients with epicondylitis. *bio-med.euroasia-science.ru.* 2023; 1-02(103):3-5. [Internet]

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Address for correspondence:
Assoc. Prof. Dr Irena Stoilova, MD, PhD
Department of Hygiene Medical Ecology, Occupational Diseases and Disaster Medicine, Faculty of Public Health, Medical University - Pleven, 1, St. Kliment Ohridski Str., 5800 Pleven, Bulgaria.
E-mail: irena.stoilova444@abv.bg.