EMPLOYEES' HYGIENIC ANALYSIS OF DISEASES IN SHERABAD CEMENT PRODUCTION

[1]Danaev Bakhtiyor Farkhatovich, [2]Almardonova Zulkhumor Jalilovna, [3]Djuraeva Muhabbat Ergashevna
[1,2,3]Termez branch of the Tashkent Medical Academy
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Abstract. *In this article, a hygienic analysis of morbidity rates was made depending on the age and length of service of the workers of the Sherabadenterprise for the production of cement in the Surkhandarya region.*

Keywords: *harmful factors, morbidity, personal protective equipment, occupational diseases, cement, dust, prevention.*

Relevance of the topic: Currently, in the modern developing era, the place of harmful substances, dust, waste from gas plants, cement plants, polluting the air and affecting public health is undeniable [1].

Among the diseases of the digestive system, cement dust causes the following diseases: peptic ulcer, duodenal ulcer [10], fibrosis and cirrhosis of the liver [11].

From the class of oncological diseases, cement dust causes the following neoplasms: malignant neoplasms of the nose and ear, sinuses, tendons, trachea, bronchi, malignant neoplasms of the lungs and other unspecified diseases of the respiratory system. [12]

We studied the influence of cement dust on the lives of children and adolescents living near cement factories. In particular, allergic rhinitis turned out to be 2.2 times higher in children 6-9 years old, 2.7 times higher in children 15-17 years old, chronic rhinitis, nasopharyngitis - 4.8 times higher, gastric ulcer - 6.1 times higher. times, gastric and duodenal ulcers are 4.6 times higher. [13]

A number of scientific studies conducted over many years confirm that changes in working conditions at manufacturing enterprises, the introduction of modern technologies, the widespread use of various protective equipment by workers, etc. do not allow the human body to completely protect itself from chemical, physical and biological environmental factors. environment. Therefore, it was necessary to continue to conduct more thorough research into the importance of various branches of production, industry and the influence of environmental factors on the human body. Therefore, the problem of improving the assessment of food safety and dietary research, as well as the development of therapeutic and preventive nutrition for workers in various fields of activity is very relevant.

Object and methods of research: The Sherabad Cement Plant, located in the industrial zone of the Surkhandarya region, was built for the first time in 2017 and has been operating for 5 years. Today it consists of the following workshops: 1st workshop for the production of raw materials; 2-firing shop, 3-grinding shop, 4-process control system, 5-power supply shop, 6-data center, 7-product control laboratory, 8-fire safety department, 9-administration department.

Today the company produces construction cement products. Today, the company employs 846 employees, of which 827 (97.7%) are men and 19 (2.3%) are women. Data on the average working hours, average age and length of service of workers are presented in Table 2.

The morbidity level of workers was analyzed based on the international classification of diseases (ICD-1993.10) and days of temporary disability.

Statistical processing of the research results was carried out using the application package for a personal computer “Statistica for Windows 7.0”.

Analysis of the obtained data. The Sherabad Cement enterprise, built in 2017, has been operating in our country for 5 years and consists of the following workshops: a workshop for the production of raw materials; annealing shop, grinding shop 4-ASUTP, power supply shop, railway shop, product control laboratory, fire safety department, administration.

Construction cement is produced at the enterprise through various processing of rocks. The company operates in 2 shifts. At the same time, cement dust, noise, vibration, unfavorable microclimate and various chemicals deviate from established hygienic requirements and negatively affect the working conditions of the enterprise, its microclimate indicators, as well as the health and morbidity levels of workers.

The table shows the average age and length of service of workers at the Sherabad Cement Plant production enterprise.

Table

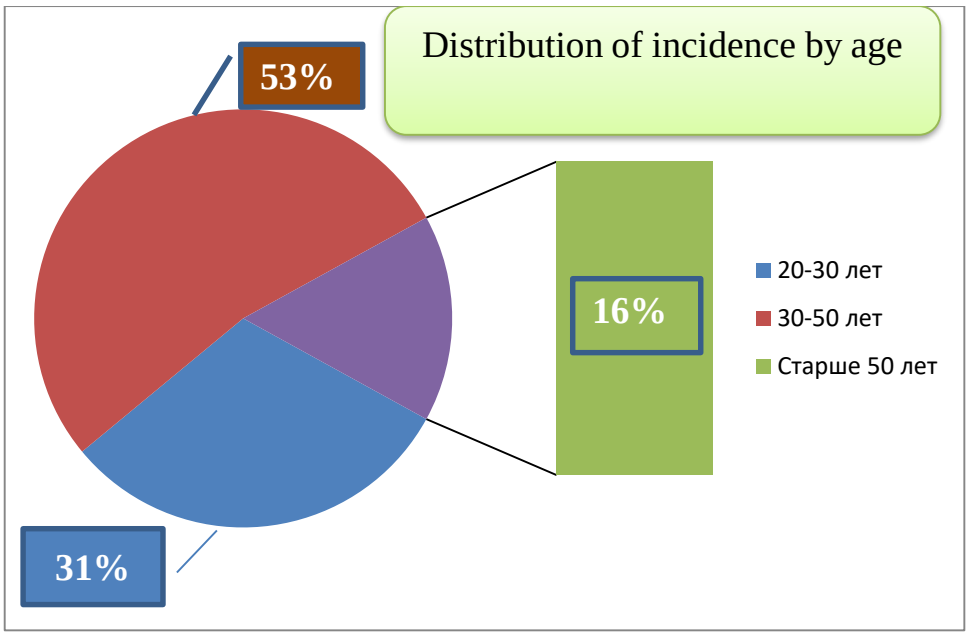
Information about the age and length of service of employees of the Sherabad Cement enterprise

Indicators	Total number of employees 846	Male 827	Female19
Average age of employees	28,1	28	36
Youngest age indicator	20	20	24
Oldest age indicator	69	69	51
Average length of work experience	27,4±0,66	27,6±0,74	22,5±0,4
Work experience (lowest indicator of the month)	1 month	3 month	1 month
Work experience (highest indicator of the month)	55	55	31

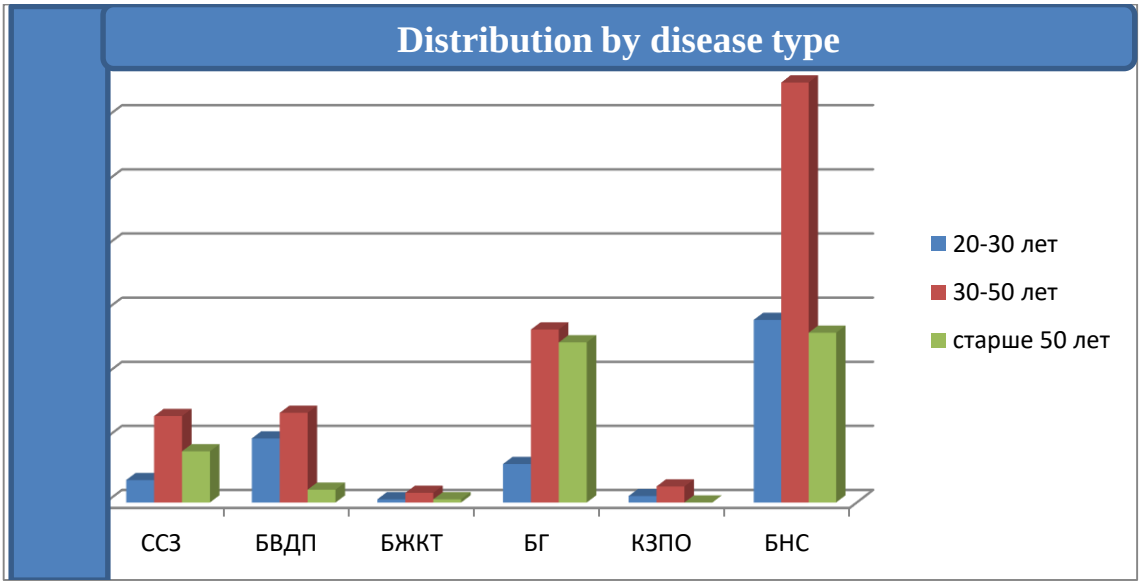
The average age of employees of the production joint-stock company "Sherabad Cement Plant" is 28.1 years, while the average age of men is 28 years, women - 36 years. The average age of the youngest workers was 20 years, men - 20 years, women - 24 years, and the average age of the oldest workers was 69 years, men - 69 years, women - 51 years.

The average length of service of workers was 27.4±0.66 years, for men - 27.6±0.74 years, for women - 22.5±0.4 years. The maximum work experience was 55 months in total, 55 months for men and 31 months for women, which is 0.7 times longer for men than for women. The minimum duration of work was 3 months for men and 1 month for women.

The results of a medical examination of 368 workers in workshops selected to study the painful condition of workers at the Sherabad cement production plant were analyzed. Of the 368 workers selected for comparison, 47 were administrative workers. The 368 workers were divided by age as follows: 115 (31%) aged 20-30 years, 196 (53%) aged 30-50 years and 57 (15%) over 50 years old.



When analyzing the morbidity rates of workers based on the results of a medical examination, 471 diseases were identified among workers. These diseases were distributed among workers by age as follows: 99 (21%) diseases among workers 20-30 years old, 248 (53%) among workers 30-50 years old and 124 (26%) among workers over 50 years old. Distribution by type of disease: cardiovascular diseases were detected in 7 people aged 20-30 years, in 27 people under 30-50 years old and in 16 people over 50 years old. Upper respiratory tract diseases were detected in 20 people aged 20-30 years, in 28 people under 30-50 years old, in 4 people over 50 years old. Diseases of the gastrointestinal tract were detected in 1 person aged 20-30 years, 3 people aged up to 30-50 years and 1 person over 50 years old. Eye diseases were detected in 12 people aged 20-30 years, in 54 people under 30-50 years old, in 50 people over 50 years old. Skin and genital diseases were detected in 2 people aged 20-30 years, in 5 people under 30-50 years old, in 0 people over 50 years old. Nervous diseases were identified in 57 people aged 20-30 years, in 131 people under 30-50 years old, in 53 people over 50 years old.



Indicators of the distribution of diseases among workers by type: CVD-Cardiovascular diseases, URTD-Upper respiratory tract diseases, Gastrointestinal tract-Diseases of the

gastrointestinal tract, ED-Eye diseases, SDGO-Skin diseases of the genital organs, DNS-Diseases of the nervous system.

Conclusion:

1. The average length of service of workers is 27.4±0.66 years, men 27.6±0.74 years, women 22.5±0.4 years, maximum work experience 55 years, men 55 years, women 55 years and 31 year. men are 0.7 times older than women. The minimum duration of work was 3 months for men and 1 month for women.

2. When analyzing the morbidity rates of workers based on the results of a medical examination, the highest morbidity was found among people aged 30 to 50 years (53%). By type of disease, the lowest incidence was found for diseases of the gastrointestinal tract and the skin-genital area, and the highest for diseases of the nervous system. The types of diseases by age of workers are as follows: cardiovascular diseases and eye diseases are most common in people over 50 years old, least common in the age group of 20-30 years. Diseases of the upper respiratory tract and nervous diseases are least detected in people over 50 years of age, and most often in the age range of 20-30 years.

REFERENCES

1. Астанақулов Д.Й, Исоков.Э.З. Гигиенический анализ условийтруда рабочих мест цементного производства г Кувасай. Ўзбекистон врачлар ассотсиацияси бюллетени №3(104) 2021.
2. Гаффаров.С.А., Рахимов.Ф.Э., Гайбуллаева.Ю.Х., Маматқулов.Х.А., Насимов.К.К. / Тоғ кончилиги ва цемент махсулотлари ишлаб чиқариш саноатидаги ишчилар саломатлиги ва иш ўринларидаги гигиеник муаммолар. / Ўзбекистон врачлар ассоциацининг бюллетени №4(106) 2011
3. Фадеева А.Е., Жилина Н.М., Полукаров А.Н., Чеченин Г.И., Климантова И.П. // Состояние здоровья детей и подростков г. Новокузнецка, проживающих (обучающихся) вблизи территории цементного завода. Мат и Дитя в кузбассе. №4(47) 2011.
4. Комплексная оценка риска для здоровья работающих при открытой добыче угля от воздействия физических факторов / В.В. Захаренков, А.М. Олешенко, Е.А. Пананотти, Я.В. Суржиков // Бюллетень ВСНЦ СО РАМН. 2006. № 3 (49). С. 29–36.
5. Методы анализа минорных биологически активных веществ пищи / под ред. В.А. Тутельяна и К.И. Эллера. – М.: Изд-во «Династия», 2010. – 160 с.
6. Жилов, Ю.Д. Справочник по гигиене труда и производственной санитарии / Жилов Ю.Д., Куценко Г.И. 2011г. 240 с.
7. Глобальная стратегия диагностики, лечения и профилактики хронической обструктивной болезни легких /под ред. Чучалина А.Г. – М., 2003. – 96 с.
8. Движков, П.П. Пиевмокониозы /Движков П.П. – М., 1965. – 423 с
9. Вредные вещества в промышленности: Справ. для химиков, инженеров и врачей. Изд. 7-е, пер. и доп. В 3-х томах. Том III. Неорганические и элементорганические соединения /под ред. Н.В. Лазарева, И.Д. Гадаскиной. – СПб., 1977. – 608 с.
10. Ретиев, В.М. Гигиена труда на цементном заводе /Ретиев В.М. – М., 1964. – 48 с
11. Portland Cement Dust – Hazard assessment document EH75/7, UK Health and Safety Executive, 2006: http://www.hse.gov.uk/pubns/web/por tlandcement.pdf.

12. Stancari V., Penazzato N. //Rass. med. ind. – 1964. – V. 33, N 6. – P. 697 713.
13. Pimentel, J.C. Pulmonary and hepatic granulomatous disorders due to theinhalation of cement and mica dusts /Pimentel J.C., Menezes A.P. //Thorax. 1978. – P. 219227.
14. Effect of exposure to dust on lung function of cement factory workers /Noor H., Yap C.L., Zolkepli O., Faridah M. //Med. J. Malaysia. – 2000. – P. 5157.
15. Danayev B.F., Ermatov N.J. Improvement of Rational Nutrition of Workers of Modern Cement Production Enterprises with Local Food Products. Central Asian Journal of Medical and Natural Science Том-3/1. 2022. – 160-163 с.