

Case report

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Accidental discovery of asbestos-related occupational pleural disease in unemployed carpenter: a healthcare safety net that needs mending

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Unemployed persons are often on the margins of the healthcare system and under the radar of safety and health organisations, as no systematic records are kept of occupational diseases caused by exposure at previous work place. Law in Slovenia requires that asbestos-related occupational diseases are verified by establishing the causal relationship between exposure at work and its effect on the worker. This report describes a case of verifying occupational pleural disease in an unemployed carpenter who was referred for consultation with occupational health specialist as part of the regular procedure for the unemployed registered at the Employment Service of Slovenia. At the consultation it turned out that the carpenter had been exposed to asbestos when he worked as a teenage apprentice. The diagnosis of the bilateral pleural disease and asbestosis was confirmed by X-ray and high-resolution computed tomography. Because he had no record of exposure in that period, we analysed his past working environment for minerals and found chrysotile in all asbestos board samples. The case was presented to an interdisciplinary committee, which verified his disease as occupational. This case points to the need of adopting guidelines for occupational health specialists providing counsel to the national employment service so that the number of unrecorded occupational diseases is minimised and their treatment is covered by the state.

KEY WORDS: *apprentice; asbestos boards; legislation; occupational disease; pleural plaques*

The Slovenian employment agency (Employment Service of Slovenia, ESS) works with occupational health specialists, who review medical records of unemployed persons in order to assess their work ability and advise social workers about the most appropriate job for them. As the consultation does not involve medical exam, this is where the occupational health physician's role stops. The unemployed are often left on the margins of the healthcare system and dwell outside the scope of work safety and health organisations or trade unions. As safety at work strategies are mostly designed to meet current needs, they do not target the unemployed or the retired, and occupational diseases caused by exposure at a previous work place are seldom diagnosed and verified.

Diseases that can result from occupational asbestos exposure are asbestosis, pleural disease, pulmonary cancer, malignant mesothelioma of the pleura and peritoneum, as well as cancer in other sites (1). The EU resolution of 14 March 2013 on risks related to asbestos exposure emphasises the role of medical staff in recognising the professional origin of asbestos-related diseases, especially due to a very long period of latency (2). According to this resolution, the burden of proof should not be on the patient.

However, in Slovenia, this burden of proof still lies with the patient. Slovenian laws and regulations clearly define who the rightful claimants are, types of asbestos and asbestos products, and the diseases that can result from asbestos exposure (3, 4), but it is left to patients with asbestos-related diseases to start the process of proving the occupational origin of their disease. Once they do, occupational health specialists take over. They collect evidence of asbestos exposure at workplace, assess the risk, diagnose the disease and submit their expertise to an interdisciplinary committee for verification. If the disease is verified as occupational, the patient has the right to claim compensation.

This report presents one outstanding case of an unemployed patient from the margins of the healthcare system who, unlike many others, was lucky enough to chance upon occupational health specialist who helped him prove occupational asbestos-related pleural disease and claim his rights.

Case description

In 2014, a 60-year-old carpenter, who had been unemployed for 10 years, was referred by the ESS to occupational health specialist for the assessment of fitness for work. The patient had already had reduced ability to work because of ventral hernia waiting for the seventh surgery. Unable to shift and lift heavy loads the patient had

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been laid off and could not find another employment for over ten years. Answering the question about his health, he said that he felt well but that “there was something in his lungs supposedly due to asbestos”. He had smoked about 15 packs years of cigarettes for 35 years and quit in 2010. From July 1971 to August 1974 he had worked as apprentice in a carpenter’s workshop and continued to work as carpenter in the same workshop until August 1975. At that time, apprenticeship consisted of six months at school and six months of practice in a workshop over a school year. During the practice, apprentices worked over eight hours a day for six days a week. Instead of working with wood, our patient worked on installing asbestos insulating boards (1250x2050 mm, 6-15 mm thick) of Belgian make (Masal, Fasal or Glasal) at different sites in Slovenia and former Yugoslavia. The boards were cut, sawed, and screwed on walls without masks, ventilation, or other safety measures. The workers knew that the boards were made of asbestos, but had no idea of its harmful effects. They usually had their lunch breaks at the workplace. Our patient had not been exposed to asbestos ever since, but continued to work with wood as carpenter proper.

In 2008, surgery of his right shoulder pointed to pulmonary embolism, leading to a follow up lung X-ray once a year. Between 2008 and 2011, the follow up revealed no suspicious changes, but in 2012 it showed extensive pleural plaques and atypical condensation. The radiologist suspected those plaques were the result of asbestos exposure. The diagnosis of bilateral pleural disease was confirmed by X-ray at the Clinic of Pulmonary Diseases in Zagorje (Figure 1) and by high-resolution computed tomography at the University Clinic of Pulmonary and Allergic Diseases Golnik in 2014.

We at the occupational health office made a list of buildings and places where our carpenter worked. There was no paper evidence, no contracts, no environmental



Figure 1 X-ray of the patient’s lungs taken in April 2014 to verify findings from 2012. It shows bilateral calcified pleural plaques, mostly in the peripheral lung diaphragm areas, and a nodular condensation in the left apex

measurements, and no risk assessment of the working conditions involving asbestos. The master-carpenter died, and the apprentice’s working diaries were burnt. The only evidence was a signed statement of the master-carpenter’s collaborator that our patient had worked with asbestos boards. It took 41 years from the first exposure in 1971 to the diagnosis of pleural plaques in 2012.

We submitted our expertise to the interdisciplinary committee with a confirmed diagnosis of asbestos disease and the statement of the collaborator confirming the patient’s work history. The expertise was rejected as insufficient.

As asbestos products have been banned from the EU since 2005 (5), we could not track down boards of the same make to any of the stores. The only possibility to find a proof was to get a sample of the insulating board from one of the patient’s old workplaces. We found it in an indoor swimming pool in Zasavje, where the carpenter used to work (Figure 2). The building manager allowed us to take a few samples. Mineral analysis, done at the Laboratory for Concrete, Stone, and Recycled Materials of the Slovenian



Figure 2 Asbestos boards on the ceiling of the Zasavje swimming pool facility where the patient worked in the 1970s

National Building and Civil Engineering Institute using scanning electron microscopy (Figure 3), and electronic dispersion spectroscopy on apparatus JEOL 5500 LV confirmed the presence of white asbestos-chrysotile in all of the samples.

We resubmitted the amended expertise, and this time the committee verified asbestos exposure. Since there were experts on the committee, the diagnosis was even extended from bilateral pleural disease to asbestosis.

CONCLUSION

Our case illustrates that at the moment, the unemployed are on the margins of the system, as no procedure has been



Figure 3 Chrysotile fibres on electronic microscope (magnification 120x)

established to diagnose and keep record of occupational diseases contracted at their earlier workplaces. However, it may also give some guidelines for improvement. It should start with extending the role of occupational health counsellors working for the ESS and defining activities to pursue suspicions of past occupational exposure. The burden of proof should lie with the system and not the individual. This will require a change in the mind-sets of current decision makers, and we hope our case will provide an incentive in this direction.

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REFERENCES

1. Dodič-Fikfak M, Črnivec R, Mandelc Grom M. Occupational diseases due to asbestos exposure. In: Dodič-Fikfak M, Črnivec R, editors. Verification of occupational diseases in the Republic of Slovenia I. Ljubljana: Univerzitetni klinični center Ljubljana, Klinični inštitut za medicino dela, prometa in športa; 2009. p. 1-11.
2. European Parliament. European Parliament resolution of 14 March 2013 on asbestos related occupational health threats and prospects for abolishing all existing asbestos (2012/2065 (INI)) [displayed 14 August 2015]. Available at <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2013-0093+0+DOC+XML+V0//EN>
3. Ministry of Health. Pravilnik o spremembah in dopolnitvah Pravilnika o pogojih za določitev boleznih zaradi izpostavljenosti azbestu in merilih za določitev višine odškodnine [Rules Amending the Rules on the conditions for the establishment of disease from exposure to asbestos and the criteria for fixing the amount of compensation, in Slovenian] [displayed 30 September 2008]. Available at <http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV9058>
4. National Assembly. Zakon o spremembah in dopolnitvah zakona o odpravljanju posledic dela z azbestom (ZOPDA-A) [Act Amending the Act Concerning Remedying the Consequences of Work with Asbestos, in Slovenian] [displayed 19 June 2009]. Available at <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO4853>
5. EUR-Lex. Commission Directive of 26 July 1999 adapting to technical progress Annex I to Council Directive 76/769/EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (asbestos) [displayed 6 August 1999]. Available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31999L0077>

Poklicna bolezen plevre zaradi izpostavljenosti azbestu pri mizarju

Nezaposleni so pogosto na robu zdravstvenega sistema in izven dosega varnosti in zdravja pri delu. Poklicnih bolezni zaradi izpostavljenosti na prejšnjih delovnih mestih v Sloveniji ne spremljamo. Zakonodaja predpisuje upravičence, vrste azbesta in azbestnih izdelkov, bolezni, ki se štejejo kot bolezni zaradi izpostavljenosti azbestu in postopek priznanja poklicne bolezni zaradi izpostavljenosti azbestu. Pri dokazovanju poklicnega izvora bolezni je potrebno objektivizirati vzročno zvezo med izpostavljenostjo azbestu na delovnem mestu in reaktivnostjo delavca. Opisan je primer verifikacije poklicne bolezni zaradi izpostavljenosti azbestu pri nezaposlenem mizarju, ki je bil predstavljen zdravnici- svetovalki na zavodu za zaposlovanje v sklopu zaposlitvenega svetovanja. Azbestu je bil izpostavljen kot vajenec v mizarški delavnici. Diagnoza bilateralnih plevralnih plakov je bila postavljena z RTG p.c. in HR-CT. Ker ni bilo nobenih pisnih dokumentov iz obdobja izpostavljenosti azbestu, smo opravili natančno delovno anamnezo, izvedli mineraloško analizo na enem od delovišč in dokazali krizotil v vseh odvzetih vzorcih. Interdisciplinarna komisija je potrdila poklicno bolezen zaradi izpostavljenosti azbestu. Primer opozarja na potrebo po sprejetju smernic za delo zdravnikov-svetovalcev, s čimer bi se zmanjšala verjetnost spregledanih poklicnih bolezni. V primeru suma na poklicno bolezen pri nezaposlenih bi morala stroške dokazovanja prevzeti država.

KLJUČNE BESEDE: azbestno-cementne plošče; plevralni plaki; poklicna bolezen; vajenec; zakonodaja