Table of Contents

Poster Session: PS-01

Contribution to the Prevention of Asbestos-Related Hazards

Ivancica Trosic
Institute for Medical Research and Occupational Health, Croatia

Abstract

For some time now, a collaborative initiative has been launched worldwide in order to eliminate risks inherent to asbestos use and the production of asbestos-containing materials. Reflecting the fast growing concern about asbestos-related health hazards, asbestos use in the European Union will be fully banned in 2005. Nowadays, concerted action against asbestos risks and their threatening transfer to the developing world is urgently needed. Most European buildings, built in the 1960s or 1970s, currently due for their first major renovation, also contain asbestos. In a number of cases, the presence of asbestos was not revealed until after the renovation started. Furthermore, despite the common belief that asbestos has been banned, this hazardous substance is still being added to various products. The assessment of the extent to which asbestos-containing materials are present in public and commercial buildings, plants and equipment can act as a decisive precursor to the prevention of asbestos-related health hazards. Therefore, forty-six selected construction bulk materials have been analyzed by optimized asbestos containing material method MDHS 77 HSE UK. The materials were analyzed by means of polarizing microscopy, reference samples and related high dispersion liquids. Out of forty-six materials, thirty were identified as asbestos-positive. Twenty-two contained chrysotile, five crocidolite, thirteen amosite, and only one contained anthophyllite, whereas actinolite and tremolite were not found in any of the examined materials. On more than one occasion, various types of asbestos have been found in a single material. Eight of the examined asbestos-containing materials contained two, and three as much as three types of asbestos. Effective monitoring of asbestos-containing materials represents a valuable contribution to the establishment of an international bank of such products and asbestos substitutes, as well as leading to the good practice in asbestos managementt.

Poster Session: PS-02

4 Wives and A Solicitor

Mary Callaghan Nicol, Carolynne Cooke, Jan Rogers and Ann Howells

Asbestos Awareness Wales, the U.K.

Abstract

It is the intention of this poster presentation to give an overview of the methodology used to set up a support group for asbestos victims and families in Wales.

It discusses the ongoing aims and objectives of this particular group and the means being deployed to achieve them despite geographical difficulties.

We are united in support of banning the use of asbestos.

Whilst we acknowledge global differences such as cultural, geographical and those of a political nature, we nevertheless feel that as human beings, it is in this united front that our strength lies.

To individuals who might be thinking of setting up such a group but who might not know where to begin, we hope that this poster offers some ideas and encouragement.

Poster Session: PS-03

A Model of Compensation for Morbidity and Mortality Arising from Occupational Exposure to Asbestos and Silica: Workers Compensation (Dust Diseases) Act 1942-1967

G Lansley, S Kidziak and R Buckley
[1]Executive Officer & Alternate Chairperson, [2]Board Member, [3]Solictor
Workers Compensation Dust Diseases Board of New South Wales, Australia

Abstract

Introduction
Many NSW workers employed in various industries and trades were exposed to asbestos and silica. A State Government, no fault compensation scheme was established in 1927 and reformed in 1967 to meet the special requirements of these workers and to streamline the compensation process.

Methods
Compensation funds are raised from a small levy on all NSW's employers. The Dust Diseases Board (DDB) provides a screening service. A Medical Authority determines disease and level of disablement and a Board comprised of Union and Employer representatives makes an award of compensation. No legal representation is required to lodge a claim or during the process itself. Individuals with malignant diseases such as mesothelioma have their claims processed and an award made within an average timeframe of 4 to 6 weeks.

Results
The Medical Authority assesses between 3,000 to 3,500 cases each year. In 2002/2003 the Board awarded compensation benefits totalling A$55,079,000. The DDB funds research into dust diseases and has contributed more than A$3,000,000 for this purpose. The DDB also provides a low cost commercial screening service to employers and their employees who may have been exposed to asbestos. The health of these workers (over 6,000 screened in 2002/2003) is then monitored by the DDB for the rest of their lives.

Conclusion
The DDB provides a low cost, efficient, effective and equitable compensation scheme to NSW workers without the need for litigation and the accompanying stress. The NSW compensation model is a world leader in the provision of statutory no fault compensation.

Poster Session: PS-04

Review of NSW Dust Diseases Board Clients Compensated for Asbestos Induced Lung Cancer: 1998-2003

Rebecca Hyland
Workers Compensation Dust Diseases Board of New South Wales, Australia

Abstract

Australia has been a prolific user of asbestos materials over the last 50 years. The NSW Dust Diseases Board (DDB) is a statutory authority which provides compensation to workers whose disablement can be attributed to inhaled silica or asbestos exposure while employed in NSW.

A long-standing dilemma faced by compensation bodies is the process of determining that a person's historical dust exposure has been sufficiently high to attribute lung cancer directly to their occupational exposure. The DDB uses the presence of silicosis or asbestosis or 25 fibre/ml.years of asbestos exposure as its criteria. In this study we reviewed information on all clients compensated by the DDB for a dust related lung cancer in the last five years to examine their clinical, occupational and exposure characteristics.

Between 1998-2003 a total of 138 ex-workers were compensated by the NSW Dust Disease Board for asbestos associated lung cancer (n=127) and silica associated lung cancer (n=11). Clinical information including disease type, pathology, coexisting morbidities, smoking history and lung tissue fibre counts was reviewed as well as occupational histories recorded in face-to-face interviews by DDB case managers. Asbestos exposure assessments made by 3 expert industrial hygienists were assessed.

All cases within this cohort were male and the majority were Australian born (75%). The average age of the group was 72 years. 67% were found to be ex-smokers with an average smoking history of 37 pack years. Adenocarinoma (38%) and Squamous-cell carcinoma (28%) were the most common histological cell types. The top three occupations where exposure to asbestos is believed to have occurred were Labourers, Waterside workers and Fitters. The top three industries were Building/Construction, Manufacturers of asbestos products and Power stations. In those with asbestos exposure, 51 had asbestosis (40%). Industrial hygienist assessment of asbestos exposure varied widely in individual cases.

Poster Session: PS-05

Incidence of Mesothelioma in New South Wales (NSW) Australia

Anthony Johnson

Workers Compensation Dust Diseases Board of New South Wales, Australia

Abstract

Australia has been one of the highest users of asbestos per capita in the world. We report the incidence of malignant mesothelioma (MM) in NSW for the last 15 years and compare these data with other published figures.

Methods

The numbers of incident MM cases from 1985-2001 were sourced from the Australian Mesothelioma Surveillance Program (AMSP), Australian Mesothelioma Register (AMR), NSW Central Cancer Registry (CCR) and Dust Diseases Board (DDB).

Results

Between 1985 and 2001 the DDB saw the number of cases compensated for MM rise from 25 per year to almost 100. Notification of cancers in NSW is a statutory requirement. The CCR reported over 150 notifications of MM per year by the end of the period observed. The AMR is a continuation of the AMSP, which began in 1980 as a formal voluntary notification scheme. Cross checks with cancer registries are regularly performed. Our results show the AMR reported annual case numbers approximately similar to those of the CCR for the same period.

Conclusion

The incidence of mesothelioma in NSW continues to increase. The incidence rate in males in NSW (4.5 per 100,000 per year) is amongst the highest in the world. The commonest industry in which cases reported asbestos exposure was the building industry (21%). Asbestos was widely used up until the 1970s in NSW, meaning the incidence of mesothelioma is likely to continue to increase.

Poster Session: PS-06

Asbestos Occupational Exposure in Some Industries from Romania

Rodica Stanescu Dumitru[1], Vali Constantinescu[1] and Elena Ruse[2]
1 Occupational Health Department,Institute of Public Health Bucharest,Romania
2 Faculty of Industrial Chemistry, Politechnic University, Bucharest, Romania

Abstract

The aim of this report was to investigate occupational asbestos exposure in some industries from Romania: manufacturing asbestos gaskets (I), asbestos fabrics (II) and asbestos cement (III). For this purpose, we assessed the following parameters: airborne asbestos concentration, urinary asbestos concentration and sputum cytology in occupationally exposed workers, in comparison with a control group.

Both airborne and urinary asbestos fibres were characterized by measuring their lengths and diameters and the airborne and urinary concentrations were calculated.

We used a Philips 515 scanning electron microscope connected to an energy dispersive X-ray microanalysis system in order to obtain both size and chemical composition data. The Saccomanno method was used for sputum cytology. We identified airborne chrysotile fibres in processes I and II and chrysotile and crocidolite fibres in process III.

The results showed the following variation in the mean values of airborne fiber length and diameter: II > I > III. Airborne asbestos concentrations varied as follows: III > I > II. Parallelism can be noticed between the airborne fibres' sizes and the sizes of the urinary fibres.

Urinary asbestos concentration (expressed in number of fibres/ml of urine and in mass of asbestos /ml of urine) varied as follows: III > I > II. Part of the urinary fibres is degraded. In the control group there were no asbestos fibres in urine.

In processes I and III sputum cytology showed dust loaded macrophages and mild atypia of bronchial cells. In process II, the same atypia occurred but the macrophages were less loaded.

We conclude that occupational exposure in asbestos cement manufacturing is one of the most harmful in Romania because of:

- the presence of airborne crocidolite fibres;
- the small airborne fibres sizes;
- high airborne fibre concentration.

Poster Session: PS-07

Supervision and Coordination of the Medical Examinations for the Workers of Asbestos-Processing Plants in Poland: AMIANTUS Project

Bożenna Stankiewicz-Choroszucha[1], Neonila Szeszenia-Dabrowska[2] and Zuzanna Szubert[2]
1 Ministry of Health, Poland
2 Nofer Institute of Occupational Medicine, Lodz, Poland

Abstract

The periodical prophylactic examinations of the former workers of asbestos-processing plants in Poland are mandatory under the provisions of the *Ban of Use of Asbestos-Containing Products Act* of June 19th, 1997, as further amended on March 14th, 2003. The generally recognised adverse health effects of asbestos exposure, such as asbestosis, mesothelioma or lung cancer, constitute the rationale for the statutory obligation to finance prophylactic medical examinations for all workers who have ever been exposed to asbestos dust, from the State budget. The periodical medical examinations enable diagnosis of the diseases in the early (including presymptomatic) stages of their development, when suitable treatment can be undertaken to prevent or retard the pathological processes.

To carry the provisions of the Act into effect, a program of prophylactic medical examinations has been launched. All workers of the 28 Polish asbestos-processing plants specified in the Act are entitled to periodic medical examinations and free-of-charge drugs designed to treat asbestos-related diseases. As the asbestos-processing plants were scattered throughout Poland, many health care units must be involved in the examinations. Thus, coordination and supervision of examinations conducted by several tens of physicians from 12 Polish health care units is necessary.

The coordination is intended to enhance: (1) implementation of a standardised method for medical examinations, as well as relevant training and consultancy, (2) monitoring adverse respiratory health effects in workers occupationally exposed to asbestos dust, (3) running a central register of workers exposed to asbestos, (4) running a database on the results of prophylactic examinations.

The tasks completed in 2000-2003 have made it possible to develop a database from the records in the "Examination Cards" received by the Coordination Centre containing information on 4,850 workers and 6,830 examinations performed on those workers in the course of the project. From a total of 4,850 workers, asbestosis was diagnosed in 698 (14.4%). There were also 16 cases of lung cancer, and 11 patients had pleural mesothelioma. The radiological findings included 1,486 cases (30.6%) of circumscribed diaphragmatic parietal plaques, while opacities were visible in lung radiograms of 1,778 patients (36.7%). Compared to the previous examinations, worse radiological findings were noted for 11.7% patients, while in the clinical examinations alone, worse results were detected in 4.6% patients.

Thus, the implementation of the prophylactic examinations program has resulted in a better detectability of the diseases associated with exposure to asbestos fibres.

Poster Session: PS-08

Mortality due to Malignant and Non-Malignant Respiratory Diseases among Workers Compensated for Asbestosis

Urszula Wilczynska, Neonila Szeszenia-Dabrowska and Wiesław Szymczak
Nofer Institute of Occupational Medicine, Lodz, Poland

Abstract

The aim of the study was to assess the risk of asbestos-related malignancies among persons with diagnosed asbestosis. The study covered a cohort composed of all Polish workers (907 men and 490 women) afflicted by asbestosis recognized in 1970-1997. The follow-up of the persons was started from the date of diagnosis. In all, 421 deaths were registered and causes of death were retrieved for 93.3% of the deceased. A significantly increased mortality was observed both in the male (300 deaths, SMR=127) and female cohort (121 deaths, SMR=150). The elevated number of deaths was noted mainly due to: non-malignant respiratory diseases (men: 42 deaths, SMR=344; women: 20 deaths, SMR=789), lung cancer (men: 39 deaths, SMR=168; women: 13 deaths, SMR=621) and pleural mesothelioma (men: 3 deaths, SMR=2,680; women: 3 deaths, SMR=7,207). Taking into account a cumulative dose of fibers, it was found that a significantly increased mortality from lung cancer and pleural mesothelioma applied to persons exposed to a dose above 25f-y/ml. The results indicated that persons with asbestosis are at higher risk of developing malignant neoplasms, especially lung cancer and mesothelioma.

Poster Session: PS-09

Elimination of Asbestos and Asbestos-Containing Products Used in Polish Government Program

Stanislawa Szalucha
Ministry of Economy, Labour and Social Policy, Poland

Abstract

Asbestos was used in the manufacture of about 3,000 industrial products, mainly construction materials (at least about 85%), such as, roofing sheet, siding or pipes, throughout the last century in Poland.

The total amount of asbestos products in Poland is estimated at about 15 million tons of which 14.9 million tons are asbestos-cement sheet (1,351 million m^2), the remaining 600 thousand tons being pipes and other asbestos-cements products.

Now it is well known that exposure to asbestos dust may cause asbestosis, lung cancer, pleural mesothelioma or benign pleural changes.

Starting from 1997, the former Ministry of Economy carried out a number of surveys and expert analyses to provide the necessary basis of the program of withdrawing asbestos from the economy, especially from the building industry. In May 2002, the Council of Ministers (the Cabinet) adopted for implementation a Program for the removal of asbestos and asbestos containing products from Poland.

The objectives of the Program are the following:

- Freeing Poland from asbestos waste and removing the long used products containing asbestos.
- Elimination of the negative effects of asbestos on the health of the population in Poland.
- Reduction of asbestos influence on natural environment.
- Creation of adequate conditions for implementation of the EU regulations and procedures regarding asbestos-containing materials.

The main task of the Program is to define the conditions for successful removal and storage of asbestos-containing materials. Removal of the asbestos-containing products is unavoidably connected with production of waste and the only way to neutralise the waste is to store it. The problem of neutralising asbestos and asbestos containing products stored at existing and new landfills will be solved upon implementation of Directive 1999/31/EC re storage of waste materials.

Advantages expected during execution of the program:

- Decreased incidence of asbestos related diseases and mortality in Poland.
- Freeing of Poland from long used asbestos-contained materials.
- Raising people’s awareness concerning asbestos threats to their life and health.
- Elimination of asbestos influence on natural environment.

Poster Session: PS-10

Chest Radiography Study on Plumbers

Shigemitsu Takayama[1], Masayuki Hatakeyama[1,2], Tomoaki Nakazono[3] and Yosuke Yamada[4]

1 Kan-Kogyo Health Care Center Clinic, Japan
2 Nara Occupational Healthpromotion Center, Japan
3 Center for Chest Radiographic Interpretation, Dai-ichi Dispensary, JATA, Japan
4 Tokyo Metropolitan Toshima Hospital, Japan

Abstract

Purpose

To evaluate the effects of asbestos exposure on chest radiographic findings of plumbers and construction managers.

Materials and Methods

We reviewed chest radiographs of 192 male plumbers and construction managers with suspected asbestos exposure at the construction site.

Chest radiographic findings and occupational history were evaluated.

Result

Pleural thickening was frequently found on chest radiographs even in construction managers with suspected indirect asbestos exposure.

Pleural thickening was more frequently seen on the lateral area than on other sites of chest radiographs.

Conclusion

Our data suggest that plumbers and construction managers have a risk of asbestos exposure at the construction site.

Hazards of asbestos exposure are considered to be one of their major health care problems.

Poster Session: PS-11

Asbestos Pollution and Lessons Learned from the Great Hanshin Earthquake

Shigeharu Nakachi
Environmental Monitoring Laboratory (EML),
Toxic Watch Network (T-Watch), Japan.

Abstract

The great Hanshin-Awaji Earthquake, which occurred on January 17, 1995, affected about 3 million people, of whom 6,433 were killed. In addition, more than 260,000 houses or buildings were reportedly damaged. About 124,000 houses collapsed and then were demolished. There were about 1,500 reinforced concrete buildings uninhabitable after the disaster, of which at least 100 buildings may have contained sprayed asbestos.

Immediately after the earthquake, a huge amount of dust released from the damaged and demolished buildings raised keen concerns about the survivors' health. As the water supply was restored, the local government authorities encouraged the personnel involved in demolition works to spray water around the site during the work. Such work, however, was often conducted in a sloppy way and failed to prevent hazardous material contaminating the area. Indeed, in February 1995, up to as many as 250 asbestos fibers per liter were observed when a building containing sprayed crocidolite (blue asbestos which had been already prohibited then) was being demolished.

In the devastated area, some volunteers established the Network for Improving the Measures to Counter Asbestos in the Earthquake-damaged Area (Hanshin ASNET) together with concerned researchers, to address the problem, and started its campaign. They opened a hotline service and started to patrol around the area to find buildings with asbestos sprayed on the walls and ceilings. Once such buildings were found, the group asked the local governments and demolition companies to take necessary measures. Their environmental activities helped reduce the release of asbestos in the damaged area. This report describes the experiences at the disaster and their lessons.

Poster Session: PS-12

Airborne Asbestos Concentration Measurements and Preventive Measures against Asbestos Exposure at Construction Worksites

Naoki Toyama[1] and Yuji Natori[2]
1 Tokyo Occupational Safety and Health Center, Japan.
2 Kameido-Himawari Clinic, Tokyo, Japan

Abstract

More than 90% of imported asbestos was used for construction materials, and most of the asbestos materials are existing now. Japanese construction workers who work at demolition sites and renovation sites have been exposed to asbestos, and risk control of asbestos will be necessary for long into the future. There are various kinds of construction worksites, for the building of small wooden houses to steel-reinforced concrete blocks, and there are many kinds of asbestos materials that could yield airborne asbestos: drywall, ceiling boards, plumbing pipes. Thus, construction workers' exposure to asbestos is uneven. The purpose of this study is to investigate the actual conditions of workers' exposure of asbestos by measurement of airborne asbestos concentration in construction demolition worksites and to estimate effectiveness of preventive measures by comparing the concentration of asbestos with and without preventive measures. To meet the recommended Occupational Exposure Limit (OEL) of the Japan Society for Occupational Health, airborne asbestos should be controlled under 0.1f/cc. There is every possibility that construction workers breaking asbestos materials without preventive measures are exposed to levels of asbestos exceeding the OEL, but that the airborne asbestos concentration can be controlled under the OEL by effective prevention measures, anti-scattering measures and enclosures.

Poster Session: PS-13

Japan's Miracle Other "Experience": from the Minamata Tragedy to the Creation of JOSHRC, the Birth of a New Spirit

Paul Jobin
INSERM, University of Paris 7, France

Abstract

If we consider industrial pollution and the waning of trade-union representation as two major issues of industrialized societies, then the case of Japan is an interesting one. By the end of the 1950s, the majority of Japanese labor unions had chosen the path of "cooperationism" (roshi kyocho rosen), refusing to recognize the victims of industrial pollution resulting from production-first banzai policies. Cooperationism also compelled industrial workers affected by occupational disease to accept this as the price to pay for good wages and "company welfare". In Minamata, however, after an initial period of passivity, refusal to accept a cooperationist policy with management led many Chisso chemical factory workers to mobilize in favor of victims of the pollution caused by their "own" factory. That was the "Minamata disease", caused by the poisoning of sea fauna by mercury waste. Legal proceedings were set in motion, but beyond monetary compensation, the intricate link between pollution and the context of work was taken into account. A new state of mind had emerged: a new spirit, both subtle and radical, had arisen among workers. In the same way, young labor unionists of industrial areas like Tokyo and Osaka, gradually won significant victories for the recognition and prevention of industrial diseases. Through the creation of networking community unions, they managed to cross the threshold of the subcontractors' universe, which until then had been disregarded by the leading labor unions. In addition, they intervened in major issues such as pollution export or the links between occupational hazards and environmental crisis. A leading pioneer of this movement was Tajiri Muneaki who played a decisive role in publicizing the asbestos scandal and the creation of JOSHRC (Japan Occupational Safety and Health Resource Center), and whose disciples are the main organizers of GAC 2004 in Tokyo.

Poster Session: PS-14

The Effect on Lung Cancer Risk of Having Asbestosis Beyond the Dose Related Effect of Asbestos Alone

Alison Reid[1] **and Nicholas De Klerk**[2]
[1]***School of Population Health, University of Western Australia, Australia***
[2]***Institute of Child Health Research, University of Western Australia, Australia***

Abstract

Background
To determine if the presence of asbestosis is a prerequisite (precursor) for lung cancer in subjects with known asbestos exposure.

Methods
2214 former workers and residents of Wittenoom, a crocidolite mining and milling town in Western Australia, with known asbestos exposure (duration, intensity and time since first exposure), annual chest x-rays and smoking information, participated in a cancer prevention programme, using Vitamin A (beta carotene for the first five years in half the participants, retinyl palmitate for everyone else). The first x-ray was read for 1988 study participants between 1990 and 1996 to obtain radiographic evidence of asbestosis as per the UICC (ILO) Classification. Cox proportional hazards modelling was performed to assess the association between asbestosis, asbestos exposure and lung cancer.

Findings
Twelve percent of study participants had radiographic evidence of asbestosis on initial x-ray. Smoking status was the strongest predictor of lung cancer with current smokers (OR=31.7 95%CI 4 - 235) having the greatest risk. Radiographic asbestosis (OR=2.15 95%CI 1.21 - 3.82) and asbestos exposure (OR=1.24 95%CI 1.05 ·1.45) were significantly associated with an increased risk of lung cancer.

Interpretation
In this cohort of former workers and residents of Wittenoom, asbestosis is not a mandatory precursor for asbestos related lung cancer. These findings support the hypothesis that it is the asbestos fibre per se that causes lung cancer and that this can develop with or without the presence of asbestosis, but that the presence of asbestosis further increases the lung cancer risk: this may be a result of underestimating the exposures.

Poster Session: PS-15

Asbestos Exposure in the Ports and Pleural Mesothelioma

Claudio Bianchi

Center for the Study of Environmental Cancer - Italian League against Cancer, Monfalcone, Italy

Abstract

During the last decades huge amounts of asbestos were imported by many industrialized countries. Asbestos was mainly imported by sea, and ports were severely involved. In the period 1960-1980 asbestos burdens ranging between 5,000 and 18,000 tons per year, passed through the port of Trieste. The mineral was transported in sacks or carton containers. These cartons often broke, resulting in high dustiness. The severity of the pollution was documented by the Occupational Medicine Unit of the Local Health Authority in 1977. In the present study 23 mesotheliomas of the pleura, observed among dock workers in Trieste between 1968 and 2004, were reviewed. Necropsy findings were available in 18 cases. The patients, all males, aged between 39 and 80 years (mean 61 years) were generally employed in loading/unloading a variety of merchandises, including asbestos. Of 18 people, for whom sufficient chronological data were available, 12 had begun their activity after 1950. A majority of patients had worked for more than 20 years. Latency periods ranged between 25 and 60 years (mean 38 years). Routine histological sections of lung tissue, examined in 17 necropsy cases, showed asbestos bodies in 15. When compared with other occupational groups, investigated in the Trieste area, port workers showed shorter latency periods and higher prevalences of asbestos bodies on routine lung sections. Both the above findings indicate an exposure to asbestos heavy in intensity. Two additional cases of pleural mesothelioma attributable to the activity of Trieste port were observed in two women. Both the patients had lived in housing facing the port. Their histories were negative for occupational as well as for domestic exposure to asbestos. Necropsy was performed in one of the two cases, and several asbestos bodies were seen on routine lung sections.

Poster Session: PS-16

Asbestos Exposure in Shipbreaking

Claudio Bianchi

Center for the Study of Environmental Cancer - Italian League against Cancer, Monfalcone, Italy

Abstract

Asbestos has widely been used in shipbuilding, so that it was difficult to find on a ship a place asbestos-free. All the varieties of asbestos have been employed, including crocidolite,which is generally considered the most hazardous type. Ship demolition is a source of heavy exposure to asbestos, unless adequate protective measures are adopted. For two decades shipbreaking has been concentrated in some Asian countries. At present about 90% of the ship demolitions in the world occur in Bangladesh, India, and Pakistan. The most important shipbreaking site is located in Alang, on the coast of Gujarat (India)[1]. A series of striking pictures taken by the Brazilian photographer Sebastio Salgado in Bangladesh in 1989, illustrated the serious conditions of these workplaces. Studies conducted in the above countries show that people employed in shipbreaking are not informed about the risk of their work[2]. The technology is primitive, and protection measures are lacking.

Environmental pollution involving neighbourhood villages has been documented in Pakistan[3]. The problem is not confined to some countries of Central Asia. In the Mediterranean region an important demolition yard is active in Aliaga on the Western coast of Turkey. International co-operation is necessary to confront the shipbreaking emergency.

References

1. Langewiesche W. The Outlaw Sea. North Point Press, New York, 2004.
2. Chowdhury-Repon AR. Asbestos in Ship-Breaking Business in Bangladesh. GAC 2004 Tokyo 19-21 Novembre 2004 (Plenary Session 2).
3. Jehan N et al.. The Hazards of Using Scrap Asbestos from Ship-Breaking Operations and the Effect of Environmental Exposure to Asbestos on Women's Health in Sari Kili, NWFP, Pakistan**.** GAC 2004 Tokyo 19-21 Novembre 2004 (Workshop E).

Poster Session: PS-17

Towards an International Standard for Compensation: A Holistic Approach to the Assessment of the Human Consequences of Exposure to Asbestos

Lundy Braun[1] and Sophie Kisting[2]
1 Africana Studies, Environmental Studies, and Pathology, Brown University, the U.S.A.
2 Occupational and Environmental Health Research Unit, School of Public Health and Family Medicine, University of Cape Town, South Africa

Abstract

For nearly 50 years, workers suffering from asbestosis have made claims against governments and the asbestos industry for damage to their health. Yet, criteria for assessing damage and impairment vary worldwide. This variability stems in part from the lack of a simple method to diagnose asbestosis and determine its severity in an individual, the complex and variable natural history of the disease, and the contentious and polarizing context of litigation within which disease is defined. The legal system depends on the notion that disease is an easily definable, uniform, and predictable state. A diagnosis of asbestosis is best made using evidence from clinical examination, an individual's history of exposure to asbestos and symptomatology, radiographic changes, and decline in lung function. However, the history of workers' compensation is characterized by deep distrust between workers and industry that has influenced the degree to which various parties accept the experience of physician and patients. Consequently, there has been increasing reliance on seemingly more objective X-rays and measurements of lung function. There are several problems with an exclusive reliance on these two technologies. First, embedded in this lung function testing is the assumption that, because a test generates quantitative data, it provides easily and reliably interpretable information. In some cases, this has led to the use of rigid numerical criteria for impairment. Second, lung function testing can be discriminatory because of the widespread practice of "race correction." Third, diagnosis of asbestosis using radiography as a sole criterion can be problematic because pulmonary fibrosis, including severe fibrosis, can exist in the absence of radiological evidence of damage. Rather than privileging any one particular tool or method of diagnosis, we argue that a holistic approach to diagnosis and determination of impairment, that combines patient experience, clinical assessment, radiology, CT scans, and lung function should be employed in evaluating patients for compensation.

Poster Session: PS-18

Turning Anger into Action

Linda Reinstein

Asbestos Disease Awareness Organization (ADAO), the U.S.A.

Abstract

Linda Reinstein, Executive Director and Cofounder of the Asbestos Disease Awareness Organization & the ADAO Coalition for Asbestos Awareness, turned anger into action.

Recognizing that awareness will lead to prevention, early diagnosis, new treatments and a cure, Linda unleashed decades of non-profit experience, her strong communication skill, and extensive networking experience and founded ADAO.

After a series of misdiagnoses, after enduring months of undiagnosed symptoms, surgery confirmed her husband was suffering from mesothelioma. Paralyzed by the grim prognosis and radical treatment options, Linda began exhaustive asbestos and medical research. Uncovering over a hundred years of asbestos documentation linking the hazardous material to disease, and numerous treatment recommendations, Linda vowed to one day share her resources, knowledge and experience to help others; thus educating the public about asbestos exposure and the impact on victims and their families.

Linda will share the development, structure, vital components and tips for successfully establishing and managing your own grassroots organization.

Poster Session: PS-19

Current Status of Using Asbestos in The Roofing Sheet Factories of Vietnam

Nguyen Ba Toai
Civil Engineering, Hanoi University, Vietnam

Abstract

In Vietnam, chrysotile asbestos is being used in manufacturing of roofing materials, friction products, thermal insulation and fire protection clothing. More than 90 percent of chrysotile consumption is used in asbestos-cement roofing sheet factories (about 35). Their output capacity is approximately 60 million square metre per year. Although not as dangerous as crocidolite and amosite, chrysotile can cause pneumoconiosis and lung cancer. In the asbestos-cement roofing sheet factories, there are many polluting materials, but chrysotile dust is the most dangerous. The existing level of chrysotile dust pollution is clearer following environmental measurements implemented by a national mission team at the end of 2002.

The main reasons for air pollution are explained: open processing line, dry grinding, lack of pollution protection systems and lack of knowledge on safety and environmental protection. The results of the national survey of occupational diseases concerning asbestos for workers in 10 factories is presented. 1,032 workers were screened for asbestos-related lung diseases by chest X-ray. After that, the author describes some of the efforts contributing to the necessary reduction of pollution in all the asbestos-cement factories and to research on asbestos replacement in Vietnam. At the end, the author would like to recommend options to reduce existing pollution, to protect workers' health and to ensure sustainable development of asbestos-cement roofing sheet factories during the period when chrysotile is being replaced with safer materials.

Poster Session: PS-20

A New Standard for Repair and Maintenance of Installed Asbestos-Cement Materials

Andy Oberta

Environmental Consultant, Environmental Consultancy, the U.S.A.

Abstract

At the Hellenic Asbestos Conference two years ago, Andy Oberta announced that ASTM International would develop a new standard. The standard has been published and he expresses his thanks to those who reviewed it and provided comments.

The problem presented by asbestos-cement products is the release of asbestos fibers due to natural causes such as the weathering shown here and, more to the point of this standard, by physical disturbance during maintenance, renovation and repair operations.

The standard known as E2394 addresses the problem of working with existing asbestos-cement products when it is not feasible to remove them instead.

E2394 describes the types of work that can create dust and release asbestos fibers into the air. Following the procedures reduces the chance for exposure to airborne fibers.

You are probably familiar with the many forms of asbestos-cement products, the most widely-used application of asbestos fiber in the world. Here are a few examples.

E2394 explains why these work practices are needed and the principles behind their use. Supervisors can use the procedures in the appendices to train their workers and as checklists when doing the work at the job site.

These examples illustrate two types of work practices that are covered in E2394. The hole in the air duct would be cut with a hand saw. The hole is being drilled in the siding with a power drill at low speed.

Dust and fiber release are controlled mainly with wet methods: soapy water and shaving cream, for instance and by doing the work with hand tools whenever possible. Power tools and special vacuum cleaners require resources for proper operation and maintenance that may not be available to some users of E2394.

E2394 does not encourage the installation of new asbestos-cement products such as this roof and walls. It is not intended for large scale abatement projects, such as removing siding as shown here, although some of the procedures may be applicable.

Supervisors and managers who direct maintenance, renovation and repair work should become familiar with its underlying principles as well as the detailed procedures. Government and NGO representatives should use it to develop regulations and programs to protect workers and their communities.

E2394 may be purchased on-line from the ASTM website at a current price of $38USD in North America and $41USD elsewhere. If you want to obtain it in your own country, a list of sources is posted on the website at the address shown here.

ASTM welcomes comments and inquiries about their standards, which continue to be improved after they are published. For information on the standards organization in your country, consult the list mentioned above.

Training is an important part of using a standard. ASTM provides training in countries where their standards are used. Your inquiries about training on the use of E2394 are invited.

In its 106 years of existence, ASTM has produced over 11,000 consensus standards that are used throughout the world. The resources to develop new standards improve existing ones and provide training is made possible by the sale of standards and related publications.

Poster Session: PS-21

Ban Asbestos Canada

Kyla Sentes

Ban Asbestos Canada (BAC), Canada

Abstract

Along with its mandate of pushing for the global ban of asbestos, Ban Asbestos Canada was formed with a strong desire to help and support victims. However, the sheer geographical size of Canada makes the coordination of programs and services for victims and their families challenging. In order to be effective in providing this BAC must coordinate information-transfer in each province related to respective compensation systems, legislation relating to asbestos exposure, available specialists and social supports.

Poster Session: PS-22

Asbestos and Cancer Swallow Egyptian Workers in Eleven Companies for Asbestos Products

Rahma Mohammed Refaat

Lawyer, Center for Trade Unions and Workers Services, Egypt

Abstract

In the 21st century it is appalling that workers are still being occupationally exposed to asbestos, but it is the reality. More than ten thousands workers in Egypt are continuing to be put at serious risk in eleven asbestos product companies; these companies are:

1- Egyptian pipes & Cement products – Siegwart [Public Sector]
2- Egyptian Spiral Spring Company –Yayat [Public Sector]
3- Egyptian Spanish Asbestos – Aura Misr
4- Mounir Kamel Louca & Co.
5- Sigora Trade & Integrated Contracting
6- Safa Trade & Supplies
7- United Trading Organization [U. T. O]
8- Asbestos Egyptian Factories – Ismail Tawfik &
9- Egyptian-Italian Brakes MIB – Misr Brakes
10- Eng. Mahmoud El-Guindy Plastic Equipment
11- Ahmed Hamed Shahat Sons

Occupational asbestos exposures have been rife at these companies because of lack of exposure limits and safety measures. No serious attempts have been made to provide workers with medical examinations or to carry out other tests or investigations, neither during the period of their employment nor after.

Although the Egyptian authorities drew up a ministerial decree in 1998 preventing asbestos' importation, a step back has been taken, after only two and a half months, in response to pressure from the business world and employers. The Minster of Interior Commerce (who issued the first decree) has issued a new one [no. 97/1999] to permit importation of asbestos with a derogation from prohibition directing the asbestos-product companies to improve their conditions. None of these companies – not even the public sector ones – have taken any steps to improve conditions, so far.

The National Institute of Occupational Safety and Health (a governmental institute) has been studying the influences of occupational exposure to asbestos fibers on the respiratory system. The examined population comprised 556 subjects, of whom 476 were currently exposed to asbestos-cement dust mixtures for varying durations of exposure, in the Siegwart company[1], and 80 control subjects, who were never exposed to asbestos cement dust mixtures in their jobs, of nearly the same ages and socio-economic standard as the exposed group. At the same time samples from the workplace environment have been taken and measured.

The outcome of this research is summarized below:

The concentrations of asbestos fibers in the work environment reached high levels – especially in proximity to the pipe cutting operation (82.13f/ml, which is incomparable with the exposure limits).

Three hundred and thirty-one exposed workers [69.54%] had one or more clinical manifestations (dry cough, productive cough, haemoptysis or coughing blood).

The study notes that, so far, no cure has been discovered for most asbestos diseases and once any of these diseases sets in, it is progressively aggravated. Clinical manifestations, of different patterns, are proportionally propagated with the exposure period, as they affected 40.63% of the exposed workers who spent less than 5 years in the plant, 59.77% of those employed for 10-15 years, 81.52% of those worked for 15-20 years, 83.02% of workers employed for 20-25 years and 86.05% of workers employed for more than 25 years.

It was expected that 21.85% of the exposed workers would suffer from asbestosis.

Although the above-mentioned research was undertaken more than ten years ago, raising many recommendations, more than 10 thousand workers are still being exposed to asbestos in the course of their work unprotected by any exposure limits or safety measures.

The Ora-Egypt Company for asbestos products

This company has been involved with asbestos products in 10th of Ramadan city since 1983, usually neglecting necessary safety measures and standards. The 120 workers in this company are exposed to asbestos beyond exposure limits and other exposure criteria, and as a result, 46 out of them have cancer.

The Ora-Egypt Company workers organized a strike – demanding that the Egyptian authorities close the factory and not re-open it unless the owner guaranteed that the necessary safety measures and standards would be implemented.

In the matter of Ora-Egypt workers problem, our center has filed a petition against the asbestos industry in Egypt. It was a situation calling for support of the workers in raising their demands to stop the murderous crime that was being knowingly committed against them.

Possibly in light of the facts and details we that we filed to different parties and concerned institutions, recently, the Parliament Health Committee recommended stopping the asbestos industry.

But on the other hand, the business world, employers, and even some governmental parties and administrators have applied counter-pressures. In spite of this we still try!!

1. The Siegwart company is an asbestos cement pipe factory located in Helwan (to the south of greater Cairo City). Number of employees : 4500 persons.

Poster Session: PS-23

Asbestos Pictures from Pakistan and Thailand

Noor Jehan

Assistant Professor, Department of Environmental Sciences, University of Peshawar, Pakistan

Abstract

Various facts have been recorded and documented in the form of photographs regarding the environmental health hazards and risks of asbestos in different locations in Pakistan. These photographs show inadequate and improper handling, storage, transportation and uses of pure and mixed asbestos products in mining, crushing, grinding, processing and products of local as well as imported asbestos, in the form asbestos scrap from ship-breaking (Figs 1-10). These pictures provide self-explanatory qualitative and quantitative documentation of environmental health hazards and risks in Pakistan.

During my recent visit to Thailand, I collected some data in the form of pictures in various cities including Bangkok, Chumbori and Pathaia regarding the huge amount of asbestos consumption in various products and their mishandling in various industrial sectors. Those pictures give an overview and the overall present and future status of asbestos health risks in Thailand. According to my observations, Thailand may one of several countries, where an asbestos disaster may occur in the near future

Poster Session: PS-24

The Search for Justice

Corrinne Heaney

Justice for Asbestos Victims Northern Ireland, the U.K.

Abstract

The widespread use of asbestos in industries such as shipbuilding, insulation engineering, construction and so on, has left a legacy of suffering, illness and death.

Although no longer in use, the damning after-effects of this deadly material can be seen quite markedly in Northern Ireland today. Those who are affected most by asbestos related illnesses are those who were involved in shipbuilding, (Harland and Wolfe), and construction, for example, in power stations and factories.

My grandfather Robert (Bob) had worked in Portishead Power Station, during the 1950s and 1960s. He was an insulation supervisor and worked in various companies including William Kenyon and Cape Asbestos Contracts. He died of peritoneal mesothelioma on 15th August 1978.

My uncle Eddie also went to England to work He worked as an apprentice thermal insulation engineer. Throughout the years he also worked for Cape Asbestos Contracts. He died in June 1978 from peritoneal mesothelioma.

My uncle Denis worked for Cape Asbestos in insulation projects in Derry. It is likely that he suffered asbestos exposure in Coolkeeragh Power Station. He died of asbestos related lung cancer on 14th of July 1994.

My father, Tom went at the age of 15 to work in Portishead Power station, with his brother, Eddie. He too worked as an apprentice. He became a thermal insulation engineer and worked with several employers including, Cape Asbestos, Turner and Newall, Cork Insulation and he also worked in Coolkeeragh Power Station in Derry. After having watched his father and two brothers die of diseases caused by asbestos, he too became ill.

In November, 1999, he was diagnosed as having pleural mesothelioma. He died on 21st August, 2000.

This is just one example, out of many, of those who are currently suffering with asbestos related illneses. Here, we see almost an entire family suffering and dying, in the prime of their lives simply because of dangers they were exposed to, while they worked hard to provide for their families. In Northern Ireland this problem will reach epidemic proportions because of the shipbuilding and construction industry. These people only tried to make an honest living and now they are suffering and dying. Where is the justice in that?

Next ⇒