

CORRESPONDENCE

Defamatory article by Martin Walker

In its March/April issue of 1998, the *Ecologist* magazine carried an article by Martin Walker which attributed to me bizarre beliefs about the causes of cancer that I do not hold and impugned my scientific independence.¹ At the time, I chose to ignore this inaccurate article. With hindsight, however, this may have been unwise as the article has continued to be circulated and has, I understand, been referred to as if the contents were reliable by a member of one of the Chief Medical Officer of Health's advisory committees. It seems, therefore, necessary to put on record the incorrectness of some of the statements.

These include the following:

(1) "From 1979 to the end of his career, Sir Richard also received a very substantial yearly reward for research into cancer from General Motors." This is untrue. In 1979, I received from President Carter one of three prizes for cancer research, which are donated annually by General Motors and given to different people each year. I have received no other money from General Motors and none of my research has been funded by General Motors.

(2) The statement that I have "always refused to accept the connection between man-made radioactivity and cancer" but have "always seen, for reasons best known to himself, natural radiation as a major cause of leukaemia and other cancers" is untrue. On the contrary, I have never distinguished between the effects of man-made and natural radioactivity (as, dose for dose, there are not any) and much of my research has been to assess the risk of cancer from man-made radioactivity.

(3) A question "why have Doll and his colleagues always insisted that only very high levels of man-made radioactivity were harmful?" is answered simply. They have not. On the contrary, I was one of the first (with Court Brown) to demonstrate an approximately linear relationship between (man-made) x irradiation and the risk of leukaemia and to suggest that the relationship held down to very low doses and I have consistently held to this view ever since. With Dr Sarah Darby and others, I have published one of the few papers providing any evidence of a possible leukaemogenic effect of radioactive fallout.

(4) "Doll's refusal to accept that any man-made chemicals can cause cancer and other serious health problems" does not accord with my tabulation of 20 chemicals as established causes of human cancer in Peto's and my paper on the avoidable causes of cancer (Doll and Peto, 1981²) most of which are man-made nor with the results of my own research demonstrating the carcinogenic effect in humans of five chemicals or groups of chemicals, three of which were man-made.

(5) "Doll does not accept that air pollution of any kind may be regarded as a cause of lung cancer or of any other diseases of the respiratory tract" does not accord with my consistent belief that air pollution has been an important cause of chronic obstructive lung disease and my published estimate that, in previous decades, it may have been responsible, in conjunction with cigarette smoking, for about 10% of lung cancers in some big towns.

(6) "For Sir Richard Doll, . . . , the cancer rate is not increasing—nor indeed could it

increase because lifestyles are becoming healthier" is another bizarre statement that in no way reflects anything I have ever said or could have said. Whether "the cancer rate" is increasing is a question of fact and I have repeatedly drawn attention to the recent increase in the age-standardised incidence of most of the cancers Walker lists as having increased (and, of course, to the decrease in the age-standardised incidence of several others, which he doesn't list). I have never thought or implied that lifestyle was the only cause of cancer nor that all aspects of lifestyle were getting healthier.

(7) "He (Sir Richard Doll) tells us too, against all the evidence, that the continued, unregulated and untested introduction of chemicals into our food, can do the land, the farmers, and ultimately the consumers, nothing but good" is equally bizarre. I have never said anything like this and believe the precise opposite.

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- 1 Walker M. Sir Richard Doll: a questionable pillar of the cancer establishment. *Ecologist* 1998;28:82-92.
- 2 Doll R, Peto R. The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today. *J Natl Cancer Inst* 1981;66:1191-308.

Lung cancer mortality in an urban and industrialised area of Brazil: 1980-93

Lung cancer is the principle cause of morbidity and mortality from cancer in the developed countries, and several epidemiological studies show its relation to environmental exposure in urban industrial areas.¹⁻³ Studies of this type are rare in regions of South America, where there are similar urban industrial areas to those in developed countries.

With the objective of contributing to this body of knowledge, we carried out an ecological study aimed at comparing the mortality from cancer among residents in a region of São Paulo State. Within this state, which is the most developed in Brazil, the region of Baixada Santista has the greatest general mortality from cancer, highlighting lung cancer as the leading cause of death among that population.⁴ Baixada Santista is a coastal region with bathing beaches, and had about 1 300 000 inhabitants in 1994 distributed among eight municipalities. It is separated from the capital of the state, which is located on a plateau, by a large mountain range. Four of its municipalities (NIP), located along the coast, are geographically and economically distant from the largest industrial port of Brazil, to which the other four municipalities (IP) are linked.

In the IP area, beginning in 1950, along a stretch of 148 km² of Cubatão municipality, were installed: an oil refinery, a petrochemical plant, a steel mill, a cement plant, six fertilizer companies, and a paper mill. The raw material and supplies, as well as the final products from this area are transported over an intense network of roads to the plateau and to the three ports, one of which is the most important in South America.

Deaths from lung cancer (industrial classification of diseases revision 9 (ICD-9) 142 and 163) occurring in 1980-93 among male residents from the area of IP (533) and residents outside this area, NIP (365), were selected through the state system of data

analysis (SEADE). In each of the areas, the mortality was calculated, by standardisation to the world population of 1960, for the age groups over 10 years and 30-74, for the total period, and for the periods 1980-6 and 1987-93. The ratios of mortality (were calculated with 95% of probability for the confidence interval (95% CI) were calculated. The methods of the International Agency for Research on Cancer (IARC) were used for these analyses.⁵

A significant excess of mortality from lung cancer in the area of IP was found in all the age groups in all the periods studied. However, the mortality ratios based on 95% CI, were greater in the first period (1980-6), with a ratio of 2.24 (95% CI 1.80 to 2.79) for the age group over 10 years and 2.24 (95% CI 1.76 to 2.86) for the age group 30-74. This corresponded to that portion of the population which is economically active. In the second period (1987-93) the ratios were 1.72 (95% CI 1.49 to 2.00) and 1.53 (95% CI 1.27 to 1.81), respectively, for the age groups over 10 and 35-74.

It is thought that this excess is related to exposure to occupational and environmental carcinogenic agents, and to smoking. Some reports from the governmental environmental institution^{6,7} have shown an increased concentration of carcinogenic substances in the workplace, as well as in the general environment. Among them, we highlight the following: metals (chrome and nickel), aromatic hydrocarbons (benzene and styrene), polycyclic aromatic hydrocarbons (PAHs, benzo(a)pyrene, anthracene, naphthalene), halogenated derivatives of hydrocarbons (tetrachloroethylene, perchloroethylene, vinyl chloride), formaldehyde, lampblack, silica, particulate material, nitrogenated compounds, and derivatives of sulphur. The associations between lung cancer and exposure to such substances have been analyzed by several authors.^{8,9} Moreover, exposure to asbestos must be great in Baixada Santista, in view of the fact that this fibre is in widespread use as thermal insulation, not only in industries, but also in cargo ships. Stealand *et al*¹⁰ found that the risk of lung cancer was five times greater in people exposed to asbestos. Also in the region, the exposure to PAHs seems to be intense and extensive, originating from the activities of industries and ports, and also as a result of the combustion of diesel oil by the lorries that pass along the network of roads.

The complexity of the exposure to these multiple carcinogenic agents makes imperative the need to take into account three factors that can be contributing greatly to the increase in concentrations in workplaces, air, soil, and water of this area of Baixada Santista: (a) the transfer, to some industries, of obsolete technology from other countries; (b) the barrier formed by the mountain range (Serra do Mar), making the dispersal of industrial pollutants difficult; (c) the lack of effective measures of industrial hygiene up to 1983. Only after this date were governmental programmes of control of local pollution implemented. It is assumed that the lower ratios of the significant excess in mortality in the area of IP could have been due in the second part of the study (1987-93) to the implementation of this programme of control.

These results reinforce the need for epidemiological case-control studies that could better characterise the relation between lung cancer and several occupational and environmental carcinogenic agents which are

present in the region, possible synergism among them, and other risk factors—in particular, tobacco smoke.

Furthermore, such analyses could put the interactions of these factors into perspective, alongside genetic susceptibility—another important factor in the induction of cancer. Knowledge of this type is fundamental so that preventive measures can be taken.

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- 1 Parkin DM, Pisani P, Ferlay J. Estimates of the worldwide incidence of 18 major cancers in 1985. *Int J Cancer* 1993;54:594–606.
- 2 Frumkin H. Carcinogens. In: Levy BS, Wegman DH. *Occupational health: recognizing and preventive work-related disease*. Boston: Little Brown, 1995:287–304.
- 3 Steenland K, Loomis D, Shy C, et al. Review of occupational lung carcinogens. *Am J Ind Med* 1996;29:474–90.
- 4 Medrado-Faria MA, Almeida JWR, Zanetta DM. *Mortalidade por câncer na Baixada Santista. Complexo industrial e demais municípios, período de 1980–96*. Brasil: Relatório para o Centro Nacional de Epidemiologia (CENEPI/Min. da Saúde), 1997.
- 5 Smith PG. Comparison between registries age-standardized rates. In: *Cancer incidence in five continents*. Vol V. Lyon: International Agency for Research on Cancer, 1987. (IARC Sci Publ No 88:790–5.)
- 6 Companhia de Tecnologia de Saneamento Ambiental (CETESB). *Resíduos sólidos industriais na bacia do Rio Cubatão*. São Paulo: Secretaria do Meio Ambiente do Estado de São Paulo, 1980.
- 7 Companhia de Tecnologia de Saneamento Ambiental (CETESB). *Avaliação de poluentes atmosféricos de origem industrial, na região de Cubatão: subsídios para uma política de ação*. São Paulo: CETESB/DEAR, 1980.
- 8 Simonato L, Boffetta P, Kogevinas M. Epidemiological aspects of cancer risk associated with exposure in the occupational environment. *Med Lav* 1996;87:5–15.

Guidelines on good publication practice

I was interested to read the excellent COPE Report paper¹ and note the intention of *Occupational and Environmental Medicine* to follow these guidelines.

In particular, from the occupational health point of view, I welcome the inclusion of involvement of the study participants in consideration and agreement of the research protocol, although I am a little sad that the COPE Group have restricted their consideration of prepublication information of the results to “patients, especially if there are clinical implications”.

As you are aware, the professional guidance on ethics for occupational physicians² now includes a specific section on occupational health research which highlights the need to consider release of results, including prepublication briefings to workforces who are the subjects of such research. I know that the BMJ Group have long been in support of this sort of ethical stance, and would hope that in the future COPE might expand their consideration of prepublication information beyond patients and clinical medicine into workers in the occupational setting.

Another area of ethics of research relevant to occupational health not considered by COPE is the field of data access and shared data. Research in the workplace can be consented to by the workforce for a specific purpose, specific protocol, and even on occasions for the use of a specific researcher.

There remains the question whether these data once obtained are, or should be, available for others to use in other protocols for other purposes. Certainly in the nuclear industry, we have taken the view that it should not, without revisiting the consent of the workforce. Perhaps this too is an area that COPE might consider in the future.

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- 1 Committee on Publication Ethics. The COPE Report 1999: guidelines on good publication practice. *Occup Environ Med* 2000;57:506–9.
- 2 Faculty of Occupational Medicine. *Guidance on ethics for occupational physicians, section 6, 5th ed*. London, UK: Faculty of Occupational Medicine, May 1999.

BOOK REVIEW

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Crofton and Douglas's respiratory diseases, 5th edition. Edited by: A SEATON, D SEATON, A G LEITCH. (Pp 1696; £195.) 2000. Oxford: Blackwell. ISBN: 0 86542 8573.

It is difficult to think that it is 30 years since the first edition of *Respiratory medicine* by Crofton and Douglas was published. It was the first comprehensive textbook of respiratory medicine in the United Kingdom and every respiratory physician had a well thumbed copy. The editorship moved to the present editors and the fifth edition has just been published in two volumes. The editors for the first time have invited some of their colleagues to write specific chapters.

Crofton and Douglas has always been characterised by beautiful, lucid writing and this continues to be an outstanding feature, supported by many attractively presented figures, radiographs, and line drawings. Reading this book is a real pleasure. A second major strength is the very balanced perspective it provides. The authors are skilled at separating the genuinely important from more transient fashionable fads and the writing is proportional to the requirements of the reader and the importance of the topic. The book is clearly focused on the needs of patients and the need to prevent disease when possible. It includes some hard hitting comments on political issues such as the amoral cigarette industry and the way in which complacency in the treatment of tuberculosis has led to multidrug resistance.

As with any good textbook there is something for everyone. Simple but important facts such as how to measure and interpret the response to a Heaf test are explained clearly and not assumed. On the other hand the book is an invaluable reference source. If you want to look up, as I did, the evidence for

benefit from pneumococcal vaccination, there is an excellent state of the art review. Subjects such as air pollution that are particular interests of the authors are covered superbly as expected.

Are there any deficiencies? Very few as far as I can see. As readers are particularly likely to turn to a textbook when faced with a patient with a rare disease I looked up two in particular and these were perhaps covered less well than the more common diseases. The section on Langerhans' cell histiocytosis made little of its very close association with smoking—an important point both for diagnosis and management, and the reader may well be confused, as I was, by the headings relating to lymphangioleiomyomatosis (and lymphangioleiomyoma). A new, long chapter on drugs in lung disease could be a useful resource, particularly for drugs that are used relatively infrequently. It may not, however, do justice to complicated problems such as the long term effects of inhaled corticosteroids. These are very small criticisms in a book which is masterly by any standard.

To edit a comprehensive textbook that is also a pleasure to read requires knowledge, skill, experience, and wisdom. Respiratory medicine is extremely fortunate to have such an excellent book and our patients will be the beneficiaries. This book is an absolute necessity for anyone working in the area of respiratory medicine. Sadly, Leitch is not alive to enjoy the success of this edition.

A E TATTERSFIELD

NOTICE

Medichem 2001 Congress. 4–6 September 2001. Prague, Czech Republic.

Medichem—the international scientific association for occupational and environmental health in the chemical industry in cooperation with The Czech Society of Occupational Medicine of the Czech Medical Association of J E Purkyně and the Section of Toxicology of the Czech Society of Experimental and Clinical Pharmacology and Toxicology of the Czech Medical Association of J E Purkyně are pleased to invite you to take part in the Medichem 2001 Congress.

The Congress will provide a forum for the exchange of ideas among occupational health physicians working in the chemical industry, as well as other occupational health specialists such as hygienists, toxicologists, epidemiologists, safety officers, occupational health nurses, and others engaged in the field.

Topics

- Risk assessment of chemicals: the role of epidemiological methods
- Biomonitoring of exposure to chemical carcinogens
- Modern management of occupational health, safety, and environmental protection
- Allergens and sensitizers
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- Session on other current issues

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