

PostScript

LETTER

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Sex ratio at birth in Masjid-i-Sulaiman (Khozestan province, Iran)

Little is known about the factors that affect the sex ratio in humans. Many animal and human studies have indicated an association between environmental toxins and altered sex ratios.^{1,2} Masjid-i-Sulaiman (MIS) is located in the Khozestan province, southwest of Iran. The first oil well in the Middle East was located in MIS (excavated in 1908 by William Darcy). Petroleum—whether gas, oil, or liquid asphalt—that exudes in the form of springs and seepages may reach the surface. Active seepages of oil and gas overlie the MIS oilfield.³ Unfortunately, some parts of MIS (named Darr-e-khersoon, Posht-e-Borj, and Camp Brench) are contaminated by subsurface leakage of natural gas, which contains hydrogen sulphide. It has been reported that the gas dissolved in the oil of the MIS oilfield contains 40% hydrogen sulphide.⁴ We determined the sex ratio at birth of families resident in the contaminated area of MIS, and compared this with the sex ratio of the general population of MIS.

We identified 359 offspring within 51 families resident in the above mentioned area, born between 1987 and 2001. Data concerning live births in MIS are routinely compiled, using reports from the Statistical Center of Khozestan province from 1987 to 2001.

To test the null hypothesis that the probability of a male live birth in the contaminated area is equal to that in the general population of MIS, χ^2 analysis was conducted. A probability of $p < 0.05$ was considered statistically significant. The sex ratio was expressed as the proportion of total live births that were male.

The overall sex ratio in general population of MIS from 1987 to 2001 was 0.504 (total number of live births 44 040). In the contaminated area, the sex ratio was increased (0.563). This difference is statistically significant ($\chi^2 = 4.91$, $df = 1$, $0.025 < p < 0.030$).

We are aware of no other similar reports. Yang *et al* reported that the association between exposure to petroleum air pollution, near a petroleum refinery plant in Taiwan, and

sex ratio at birth was not significant.⁵ However, to clarify the effect(s) of subsurface leakage of gas on sex ratio and hormone concentrations in parents, further investigations need to be carried out.

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References

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- 2 James WH. Sex ratio of offspring as a criterion of occupational hazard, with reference to welding. *Scand J Work Environ Health* 1994;20:466-7.
- 3 Lees GM. Persia. In: *The science of petroleum*, Vol. 6, Part I. London and New York: Oxford University Press, 1953:80.
- 4 Levirsen AL. *Geology of petroleum*. San Francisco, CA: WH Freeman and Company, 1967:15-19.
- 5 Yang CY, Cheng BH, Hsu TY, *et al*. Female lung cancer mortality and sex ratio at birth near a petroleum refinery plant. *Environ Res* 2000;83:33-40.

BOOK REVIEWS



Occupational Disorders of the Lung: Recognition, Management and Prevention

David J Hendrick, P Sherwood Burge, William S Beckett, Andrew Churg (pp 638; £99.99) 2002. London: WB Saunders. ISBN 0 7020 2507 0

The authors of this book aim to draw attention to "the changing nature of the contribution the occupational environment makes to lung disease, and to the particular difficulties this poses for those who find themselves responsible for patient care or the management of relevant industries". The result is a book which is easy to read, helped greatly by use of a standard format for each chapter. The format includes management of both the individual and the workforce and prevention. The authors have also used difficult or "grey" cases, similar to one other textbook in the field. The difference here is

that the cases were circulated to all the contributors to this volume and the overall response summarised in the text. The lack of complete agreement in many instances is comforting at one level—"textbook" cases are the exceptions in practice—and this approach gives a far better feel for the real life situation.

Another attractive feature of this book are the chapters dedicated to descriptions of certain industries and the problems that arise from those workplaces, including mining, farming, the automotive industry, and health carers among the seven chapters. This does lead to repetition of some information between chapters but, as the authors rightly point out, readers will tend to dip into one particular part of the book and repetition under these circumstances is helpful rather than an irritation. The chapters on specific disciplines used in the investigation and management of occupational lung disease (for example, imaging and occupational hygiene) are good and sufficient for most needs in this context. The chapters on legislation divided geographically into North America, Western Europe, and the Pacific, Far East, and Australasia is an excellent attempt to widen the relevance of the book.

My criticisms are few and minor. While there are good generic sections on how to take an occupational exposure history and on surveillance, it might have been a useful addition to include a chapter on epidemiological aspects unrelated to surveillance and more to the research field. This would allow greater expansion on the healthy worker effect and perhaps also the opportunity to compare the now burgeoning literature on the health effects of the broader environment and how these findings might apply to the occupational scene. Boxes have been used for specific sections within chapters. Sometimes this works, but sometimes it does not. There are one or two boxes which run to four or five pages and I feel that these would quite happily sit as sections within the chapter rather than boxes. Boxes need to be short and punchy.

This book is an excellent addition to the literature in this area complimenting nicely the classical standard textbooks and at a penny under £100 is good value for money. It is targeted at all physicians, hygienists, health and safety officers, and administrators and successfully hits that target for all these groups. For exam purposes (for example, AFOM in the UK) this should be regarded as the standard text.

Jon G Ayres

IEH report on variability and susceptibility in human response to occupational exposure to chemicals

Institute for Environment and Health (pp iii + 155, £10.00) 2002. Leicester: MRC Institute for Environment and Health. ISBN 1 899110 36 4

"The whole world's odd except thee and me, and even thee's a bit peculiar at times"

That traditional Yorkshire view has become increasingly important in the past 20 years as studies of why one individual falls ill while

another stays healthy have shown the considerable influence of personal factors in the avoidance and causation of disease. It is reasonable to expect that health at work will be subject to the same range of individual factors and that they will be very important in determining the onset of work related diseases due to mechanical or physical stress, to allergens, and to chemicals.

The UK MRC Institute of Environmental Health is to be congratulated on recognising the importance of individual factors, both in their own right and as a counterpart to the averaging effect of epidemiology, by publishing this account of a discussion on major causes and consequences of individual factors in determining the range of responses to occupational exposure to chemicals. The obverse in determining what happens to the individual worker, namely variation in exposure, was left for another occasion.

The 13 original contributions, all by active British scientists or clinicians, cover the nature of the UK workforce, its general exposure to chemicals, and the surveillance schemes through which information about diseases related to chemicals may come to light (except for the wasted opportunities afforded by legal actions). Variation in the height, weight, body composition, and physical fitness of UK workers, related to age and ethnicity are discussed next, followed by six detailed chapters on the nature and magnitude of variation in lung function, xenobiotic metabolism and the implications of pre-existing diseases, current medical therapies, alcohol (but little on drugs or smoking), nutrition, and pregnancy. The final discussion brings together current views, albeit rather tentative, on the importance of individual factors in occupational health and how changing patterns of employment may affect the workforce in future.

Individual sections are tidy and clear accounts of what is known in the area covered. The anticipated "Recommendations" are a concise list of practicable ideas about confirming the importance of factors that we do understand and means to identify the existence of some that are suspected but remain to be proven.

The strengths of the book, which covers an area of proven medical and scientific importance, are that it is one of the very few recent attempts to remind us of the centrality of the individual and his or her characteristics in determining susceptibility—here to occupational exposure to chemicals. Its weaknesses are the virtual absence of consideration of immunological and psychological factors, the common problem of relating the impressive detail of differences in xenobiotic metabolism to the occurrence of chemically induced diseases, and the understated theme that is likely to underlie much work in this area in the next few decades, the libertarian approach to "Privacy" as an aggressively advanced argument against the collection of personal information likely to benefit the worker, the employer, and the nation.

Read and appreciate this IEH report as a clear reminder that the range of health and disease in the real world reflect the individual as much as the population, and as an encouraging stimulus to learn more about what it is to be an individual.

Anthony Dayan

Pleural diseases, 4th edn

Richard W Light [pp 413, \$115.00] 2001. Philadelphia, PA: Lippincott Williams & Wilkins

The pleura is frequently involved in systemic disorders in addition to the diseases that

originate in the lung or in the pleura itself. Pleural disease is therefore common and likely to become more common with the predicted increase in the incidence of mesothelioma. Common conditions are not always managed well, and pneumothorax and pleural effusions are two conditions where the expertise needed to manage them efficiently and effectively is often underestimated. A book that focuses on pleural disease and practical aspects of management is therefore welcome.

Pleural diseases, a single author book by Richard W Light, is now in its fourth edition. Its 400 pages provide a comprehensive review of all aspects of the pleura and pleural disease from the anatomy and physiology of the pleura to the range of disorders that cause pleural disease and their investigation and management. It is written by an enthusiast who draws widely from the literature on animals and man, in addition to his considerable clinical experience. The style of writing is conversational and easy to read, although it can be a little repetitive in places. Details of the individual studies are usually given, so the basis for the author's conclusions is clear. The book provides a comprehensive and up to date reference source.

The chapters on common conditions such as pneumothorax flow well and are easy to follow. The pros and cons of various management options are debated with practical advice on management. The book is not designed to give didactic advice for the busy junior doctor at the sharp end of managing a patient with a pneumothorax or a pleural effusion, for example, but would be invaluable for drawing up guidelines for management of these conditions. The section on thoracoscopy and chest tubes discusses practical aspects of technique and potential complications, although the latter gives less emphasis to trocar tube thoracostomy than would be merited from practice in the United Kingdom.

The book is well presented, although figures and diagrams are somewhat sparse; the radiographs that are present are clear. I would have welcomed more figures, particularly diagrams to show the anatomy and relation of, for example, the thoracic duct and lymphatics. Better use could be made of line drawings—to explain the physiology of fluid collection in the pleural space and where to insert thoracostomy tubes, for example.

This book will clearly be essential for people with a clinical or research interest in pleural disease. It will also be a very valuable reference source for respiratory physicians and doctors in training.

Anne Tattersfield

NOTICES

27th International Congress on Occupational Health: The Challenge of Equity in Safety and Health at Work, Iguassu Falls, Brazil, 23–28 February 2003

The Congress will have about nine keynote conferences, approaching different angles of the Central Theme; those themes will then be discussed in depth by Panels (60), where different opinions will be debated. There will be about 60 mini-symposia organised by the ICOH Scientific Committees and Work

Groups; facilities for the presentation of 1000 posters; and about 500 free papers. Interest groups may schedule meetings in Congress areas.

Conference Secretariat

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First World Congress on Work-Related and Environmental Allergy (1st WOREAL), and Fourth International Symposium on Irritant Contact Dermatitis (ICD), Helsinki, Finland, 9–12 July 2003

Congress on Work-Related and Environmental Allergy

- Work related and environmental aspects of respiratory and skin allergy
- Specific issues related to pathophysiology and skin allergy
- Management and prevention of allergy

Irritant Contact Dermatitis Symposium

- Occupational irritant dermatitis
- Prevention of irritant dermatitis
- Alternative methods for the assessment of irritants
- Irritant dermatitis from cosmetics

Satellite events

- Satellite Symposia, 9 July 2003
- Allergy School, 9–10 July 2003
- 7th International NIVA Course on Work-Related Respiratory Hypersensitivity, 11–15 July 2003

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CORRECTION

We apologise for the following errors in the paper by Buchanan *et al* (Clinical validation of methods of diagnosis of neuropathy in a field study of United Kingdom sheep dippers. *Occup Environ Med* 2002;**59**:442–6):

- D Buchanan and A Pilkington were affiliated with the Institute of Occupational Medicine, Edinburgh, Scotland, UK.
- The email address for the corresponding author is: s.hansen@clinmed.gla.ac.uk.