The Future of Occupational Medicine

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In the past, much work-related illness involved relatively major exposure to toxic agents with effects that tended to be acute and severe. As occupational hazards have been increasingly recognized and regulated, the incidence of such events has declined. However, there is an increasing recognition of the long-term health consequences of low-level exposures to harmful agents. Illness incurred by this means can be difficult to diagnose as their expression may be delayed long after exposure, and may coincide with many common conditions not involving work exposure. For example, Parkinson’s disease has a greater incidence among those employed in certain industries but is also prevalent in the general population. The future of occupational medicine will thus increasingly overlap with more environmentally widespread issues. This will make epidemiological studies important but more challenging. Since many confounders can limit the precision of such studies, their value will be increased if findings can be paralleled by results from experimental animal models. Such substantiation can strengthen a suspected link between a specific exposure and any pathological outcome. The almost invariable epidemiological conclusions that “more work needs to be done” will not be indefinitely acceptable. Occupational medicine increasingly relates to the health effects of the general environment. There is a gradual transition from high dose exposures, to more subtle effects of prolonged low-level exposure on health. Since such chronic changes can mimic or interact with other diseases or the aging process, the contribution that occupational studies can make to public health is likely to be enlarged in the future.

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