Is vinclozolin a reproductive hazard to men?

Zober et al. examined fertility, hormones, and offspring sex ratio of men exposed to the fungicide vinclozolin. These authors were inclined to dismiss the possibility that it has any deleterious effect on the male reproductive system. I should like to suggest in contrast, that its effects in two respects resemble those of the nematocide dibromochloropropane (DBCP), which lowers sperm count and is associated with a highly significantly lowered offspring sex ratio.

Zober et al. report that although the testosterone concentrations of exposed men were unchanged their follicle stimulating hormone (FSH) concentrations were significantly higher than those of controls (P = 0.004). Similarly, increased FSH and unchanged testosterone were found in men exposed to DBCP. Increased gonadotrophin, or lowered testosterone concentrations, or both are characteristic of many illnesses in men.

The offspring of men exposed to vinclozolin were born nine times more often to boys and 51 daughters. Compared with an expected Caucasian live birth sex ratio (proportion male) of 0.515, these figures yield a $x^2$ of 1.05 ($P = 0.15$, one way). So although not formally significant, they may be thought to be suggestive. I suggest that further study of the possible effects of vinclozolin on the male reproductive system are merited. Its known similarities to an established hazard, DBCP, are disturbing. Especially interesting (and easy to gather) would be the sex ratios of offspring of men exposed to vinclozolin.

Editor—In a thorough review Spurgeon et al. concluded that various occupational or environmental factors may lead to an increase of non-specific symptoms such as headache, tiredness, eye irritation, and backache. When they are (rightly or wrongly) perceived as health hazards. Dissatisfaction with specific aspects of work may stimulate the occurrence of a similar pattern of health complaints. The authors discussed the role of individual and social factors in the perception of health and the tendency to report symptoms. Most probably some people are more sensitive to the psychosocial factors mentioned.

Spurgeon et al. did not pay attention to one point. If anxiety and dissatisfaction affect the perception of health, there might be a comparable effect on the perception of environmental factors. If so, negative or anxious feelings may also intensify the reporting of complaints about aspects of work in a non-specific way.

Many studies in the field of occupational epidemiology are (at least partly) based on self reported health or work related exposures. It is obvious that the tendencies mentioned may lead to biased results. Any particular problem that crops up in a work situation may give rise to dissatisfaction, which in turn stimulates the tendency to report non-specific symptoms and complaints. Assuming that this tendency is stronger in some people than others, spurious associations between work and health effect can be expected. This is an additional reason to explore how psychosocial factors may colour the reporting of complaints. Two topics should therefore be added to the recommendations for further research as formulated by Spurgeon et al.

(1) Empirical evidence should be searched for our hypothesis that feelings of anxiety or dissatisfaction may increase complaints about (probably non-specific) aspects of work. Research done on