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Anesthetic gases and occupational hazard.

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LETTER TO THE EDITOR

Anesthetic gases and occupational hazard

Sir,

We read the review "Anesthetic Gases as an Occupational Hazard" in this journal (vol 6, no 2, pp 85—93) with a great interest. According to this review Göthe et al (2) found a difference "between smokers and nonsmokers in that nonsmokers more often bore malformed children, whereas pregnancies among smoking women more often ended in spontaneous abortion, the possibilities of malformations occurring thereby being diminished." This statement is a slight misinterpretation of the results reported by Göthe et al, whose study comprised an analysis of more than 3,200 pregnancies in exposed and nonexposed nurses with different smoking habits. Another report (3) not cited in the review also included an analysis of the outcome of more than 600 pregnancies induced by male physicians, either exposed or nonexposed to anesthetic gases at the time of conception.

The difference in the *miscarriage* rate was higher between smoking and non-smoking women than between women exposed and not exposed to anesthetic gases (2). In other words, both factors affected the miscarriage rate, but smoking had, on the average, a stronger effect than occupational exposure to anesthetic gases of the type and extent that had occurred in operating rooms in Swedish hospitals up to 1974, when the information was collected.

With respect to *malformations* no significant differences could be demonstrated between pregnancies of smoking mothers exposed to anesthetic gases and those smoking and nonsmoking mothers not exposed to anesthetic gases (2). As compared

to the rates of these three groups, however, the malformation rate of pregnancies was significantly increased for non-smoking mothers exposed to anesthetic gases. Thus, it seemed as if smoking had a "protective" effect against malformations induced by exposure to anesthetic gases, but we could not detect any effect of smoking alone on the malformation rate. A possible explanation could be that smoking increased the miscarriage rate, the possibilities of malformations coupled to exposure to anesthetic gases thereby being diminished.

In the study (3) of pregnancies induced by male physicians exposed or nonexposed to anesthetic gases at the time of conception, the only significant finding was an increased probability of the child being a girl for exposed fathers. Similar observations had earlier been made by Askrog & Harvald (1).

References

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