Passive Smoking and Heart Disease

The recent review article by A. Judson Wells on the association between heart disease and passive smoking in the workplace attempts to compile good data on a very important public health issue. The risks of passive smoke exposure in the workplace have recently received a great deal of attention, such as the recent class action suit by flight attendants. However, I found the data in this review article extremely hard to interpret as nowhere in the Methods or Results was heart disease defined.

The authors did spend some time explaining that the definition for passive smoke exposure varies from study to study, but the other part of the equation is the definition of outcome—in this case, heart disease. It is unclear whether heart disease was defined as chest pain, angina, nonfatal myocardial infarction or cardiac death.

Although the physiologic mechanisms for the association between passive smoking and heart disease have been eloquently explained (1,2), a lack of a definition for heart disease in the Wells study diminishes the usefulness of the findings.

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References

Reply

Dr. Redberg (1) has raised a question as to what the heart disease endpoints were in the various epidemiologic studies that were included in my report on heart disease and passive smoking at work (2). The abbreviated endpoints for the earlier studies are given in Table 1 of my 1994 report (3), and those for the later studies are given in Table A1 of the 1998 report (2). Because these details may be difficult to ferret out, a more descriptive statement of the endpoints for the workplace studies listed in Table 1 of reference 2 are: He, et al., nonfatal coronary heart disease, defined as myocardial infarction or coronary stenosis confirmed by coronary arteriography; Kawachi, et al., nonfatal coronary heart disease; Butler, fatal ischemic heart disease; Svendsen et al., fatal plus nonfatal coronary heart disease event; Jackson, nonfatal myocardial infarction; Muscat and Wynder, nonfatal myocardial infarction; Dobson et al., fatal or nonfatal definite or possible myocardial infarction or coronary death; Steenland, et al., fatal coronary heart disease, also denoted as ICD 410-414.

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Significant Arrhythmias During Pericarditis Are Due To Concomitant Heart Disease

Danias et al. (1) contribute an important set of observations regarding spontaneous conversion of atrial fibrillation to sinus rhythm. I have no quarrel with their excellent work but including pericarditis as a cause (“underlying systemic disorder”) of significant rhythm disturbances has been repeatedly shown to be erroneous. (The sterile pericarditis model for induction of atrial arrhythmias has artificial experimental conditions without clinical counterparts [2].) A prospective series of 100 consecutive patients with acute pericarditis continuously monitored for arrhythmia (conservatively defined as 6 ectopic beats per minute or anything worse) (3) and another series of 50 consecutive patients with acute pericarditis having 24-h Holter monitoring (4) each showed significant arrhythmia (same definition) only in patients with additional heart disease. Elegant postmortem investigations of the cardiac conduction system showed that all patients with pericarditis and significant arrhythmias had also had disease of the myocardium or valves (5). Of course, significant myocarditis in the syndrome of myopericarditis can be taken as sufficient heart disease to provoke arrhythmias, but in such cases myocardial involvement is evident (6,7).

These remarks are only to correct a traditional assumption that seems prevalent despite the evidence to the contrary. (This point will be discussed in a Core Curriculum session at the College meeting in Atlanta). The clinical pearl is: if your patient with arrhythmias has pericarditis, look carefully for heart disease.

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References