Abstract

There is an ongoing debate regarding how and when an agents or determinants impact can be interpreted as causation with respect to some target disease. The criteria of causation, originating from the seminal work of Sir Austin Bradford Hill and Mervyn Susser, are often schematically applied and, furthermore, there is a tendency to misinterpret the lack of evidence for causation as evidence for lack of a causal relation. There are no criteria for the assessment of evidence concerning an agents or determinants propensity to cause a disease, nor are there criteria to dismiss the notion of causation. In this commentary, I propose a dialogue approach for the assessment of an agent or determinant. Starting from epidemiologic evidence, four issues need to be addressed: temporal relation, association, environmental equivalence, and population equivalence. If there are no valid counterarguments, a factor is attributed the potential of disease causation. More often, there will be insufficient evidence from epidemiologic studies. In these cases, other evidence can be used that increases or decreases confidence in a factor being causally related to a disease. Even though every verdict of causation is provisional, action must not be postponed if our present knowledge appears to demand immediate measures for health protection.

Keywords

Causality, Epidemiology