

Prospective cohort versus retrospective cohort studies to estimate incidence

Sir,

This is in reference to the article, "Abdominal compartment syndrome (ACS): Incidence and prognostic factors influencing survival in Singapore".^[1] The authors have conducted this study to calculate the incidence of ACS by doing a retrospective review of the morbidity and mortality reports in their general surgery department database to identify the cases (Material and Methods).^[1]

I have a few concerns regarding the methodology adopted by the authors in the present study.

Reviewing hospital based records is unable to provide us with the incidence. Incidence primarily being a rate needs two comparison time units wherein a specified population is followed through and hospital data retrieved from records is unable to provide that.^[2]

Incidence actually is a measure of probability of developing a particular condition during a specified period for the individuals in the population observation,^[3] and is calculated as the number of new cases occurring in a defined population during a specified period of time.^[4]

This point is further clarified once we have a look at the results. The authors have provided the incidence of ACS of all Intensive Care Unit admissions during the study period of 10 years as 0.1% (as a percentage), whereas incidence being a rate, should have been quoted just as 0.1 per 1000 Intensive Care Unit admissions and not as percentage. As per the definition of incidence given above, the incidence rate refers during a given time period in a specified population at risk. The measure most often used is person years and not percentage.^[5]

Further, retrospective studies usually have more potential sources of bias and confounding than prospective studies. Retrospective cohort studies like this are very efficient because they take much less time and cost much less than prospective cohort studies but sometimes exposure status is not clear when it is necessary to go back in time and use whatever data was available, because the data being used was not designed to be used in a study.^[5]

Lastly, prognosis can be expressed either in term of deaths from the disease or in terms of survivors with the disease. In describing survival after diagnosis of ACS, it must have been more useful to present incidence data in a plot of cumulative incidence over time, taking into account loss to follow-up, using a Kaplan-Meier Plot.

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