Clinical characteristics and severity of influenza infections by virus (sub)type: A systematic literature review

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INTRODUCTION

Influenza virus is clinically characterized by nonspecific signs and symptoms that are common to other respiratory infections such as, for instance, severe acute respiratory and cough. Influenza is usually self-limiting and runs its course within a few days to 1 or 2 weeks. However, in some cases, it can be severe. Influenza may also result in complications that require hospitalization and even death.

METHODS AND MEASURES

We searched articles in PubMed, using the following search string:

INFLUENZA AND (angina OR symptoms OR clinical OR coronary OR severity OR mortality OR complication OR death) AND (comparison OR comp) OR death

This considers all papers published until January 31st, 2017, that were written in English. French, Spanish, Italian, Portuguese, German, Russian, Chinese, Japanese, and Korean.

DISCUSSION

We found very limited evidence that the different influenza viruses (subtypes) differ between one another in terms of clinical presentations, underlying conditions, illness severity or case-fatality ratio.

By and large, Kilbourne’s definition of influenza as “an unvarying disease” seems to be justified by the data. Criticality, however, it needs to be emphasized that an important gap in knowledge is the detailed clinical presentation of uncomplicated influenza infection which was made difficult by low comparability, limited sample size and methodological limitations of most of the studies included. A minimum set of quality requirements for future studies in the topic should consider:

- a clear description of the study setting and inclusion/exclusion criteria;
- the use of validated measures of influenza infection; and
- the use of multivariate regression techniques providing relative risk estimates adjusted for by patient’s age, vaccine status and antiviral treatment.

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