Reviewer's report

Title: Nationwide Epidemiological Study of Severe Gallstone Disease in Taiwan

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Reviewer: Monica Acalovschi

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The manuscript presents a large epidemiological study on gallstone disease in Taiwan, focusing the severe disease (complicated and requiring emergency therapy).

It is an interesting study on a 9-year period including 155,322 cases. The conclusion is that there was an increase in hospital admission rate for severe gallstone disease in younger patients, and of pancreatitis and cholangitis in patients older than 60 years.

Comments

The study was well conducted and is welcome due to the scarcity of the data regarding this aspect of gallstone disease. The authors correctly identify the limits of their study, especially the possibility to include under the code of acute cholecystitis patients presenting with biliary colic, which means symptomatic lithiasis but not necessarily complicated.

The causes of this increase in incidence of severe cases are being analyzed. It seems to be related in part to the increased addressability of the patients to hospitals after changing the insurance system in the country. It would be interesting to know whether the increase in severity paralleled an increased incidence of gallstones in this population? There are published studies showing an increasing incidence of gallstone diseases in 10-years intervals.

Regarding the higher rate of acute cholecystitis in men, this can not be entirely explained by the lower rate of elective cholecystectomy rates in men versus women, because the change in cholecystectomy rates were almost parallel in both genders during the period studied (Fig.3).

Regarding the increased incidence of complications in those aged > 60 years, is this not related to an increased segment of the population in this age-group in this period? It would be interesting to know if the mean age of the patients with complications after 60 years increased in this period.

Minor comments

Introduction: reference 6 is cited without mentioning the country where these figures were published.

Approval of the Study by the Ethics Committee should be mentioned in Methods. English language revision is necessary.
Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare I have no competing interests.