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Age is Important, but Patient Status is also Important in Endoscopic Retrograde Cholangiopancreatography

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See "Endoscopic Retrograde Cholangiopancreatography in Nonagenarian Patients: Is It Really Safe?" by Zain A Sobani, Daria Yunina, Anna Abbasi, et al., on page 375-380.

According to a recent study by the World Health Organization, projections by the United Nations Department of Economic and Social Affairs predict that the total world population aged >100 years will increase from 310,000 in 2011 to 3,200,000 in 2050. With the aging society, the incidence of pancreatobiliary disease and cases of endoscopic retrograde cholangiopancreatography (ERCP) in elderly patients increased.[1] With development of radiological technology, the role of ERCP has consistently been increasing, not only in pathological confirmation, but also for therapeutic purposes such as the resolution of obstructive jaundice.[2] ERCP is merely "less invasive" than surgery, but is not a "noninvasive" procedure. Therefore, precautions must be taken against ERCP-related complications, and more caution is required for elderly patients in whom complications can have more dangerous and severe consequences.[3]

In this regard, many studies have evaluated whether ERCP in elderly patients is safe.[4-6] Recently, Sobani et al. published a study on the safety of ERCP in 74 patients aged ≥90 years.[7] In this study, unlike previous studies, the control group included a large number of patients aged <90 years. Moreover, this study reported that age of >90 years alone does not determine the safety or risk of ERCP but rather indicates that the risk may vary according to the patient's comorbidity assessed with the Charlson Comorbidity Index (CCI). In other words, the investigators of this study hypothesized that in patients aged >90 years, higher CCI is associated with increased risk of ERCP-related complications and mortality. After its proposal in 1987 by Charlson et al., CCI has been widely used as a predictive marker of mortality in various diseases.[8-10]

However, most studies analyzed the relationship between comorbidity and prognosis by categorizing CCI according to points (i.e., 0 points, 1 or 2 points, and ≥3 points).[11,12] Unlike previous studies, Sobani et al. analyzed whether the risk of ERCP-related complication increases with a CCI of ≥2 points as compared with 0 or 1 point, but did not clearly indicate the reason behind choosing 2 points as the reference value.[7] For example, if a patient aged >90 years has uncomplicated diabetes and mild fatty liver, his or her CCI score will be 2 points, and the two comorbidities are not considered to pose a high risk of ERCP-related complication even if they coexist. Therefore, different results may be obtained if investigators base their analyses on more finely divided subcategories of CCI.

Periampullary diverticulum is known to increase in size and frequency with old age.[13] In addition, selective cannulation during ERCP is known to be difficult despite the increased incidence of bile duct stone and cholangitis due to diverticulum.[14] This study also found that the frequency of periampullary diverticulum was higher in patients aged >90 years. However, the fact that the average procedure time was similar

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between the two groups was not mentioned in the study. As some reports stated no significant difference in the success rate of ERCP as long as it is performed by a skilled operator,[15] the success rate or duration of the procedure may not be significantly different regardless of the presence of periampullary diverticulum, on the basis of the procedural expertise of the investigators, including the authors. However, to remove doubt, the proportion of ERCP performed on a naive major papilla must be indicated. In old age, recurrent common bile duct stone or cholangitis is more likely, and endoscopic sphincterotomy would be required more often, which would make subsequent cannulation for ERCP easier and reduce the duration of the procedure. Therefore, the history of ERCP must be investigated to clarify the causality that underlies the fact that the duration of the procedure is similar in patients aged >90 years despite the more frequently observed periampullary diverticulum.

In addition, the results of the multivariate analysis showed that patients with accompanying cholangitis had a lower risk of adverse events after ERCP. However, this result is controversial, as no literature review has been conducted on the reasoning behind such a conclusion. The increased all-cause mortality after ERCP in patients aged >90 years is similar to the results of previous studies.[16,17] The interpretation of this result requires caution because patient comorbidity, rather than ERCP itself, is closely associated with mortality.

Furthermore, the risk of septic shock with acute cholangitis is higher in older patients owing to their poor general condition. Therefore, the proportions of patients aged 90 years who presented with cholangitis and progressed to septic shock, underwent ERCP after resuscitation, and converted to percutaneous biliary drainage instead of ERCP because of failed response to resuscitation must be investigated. This is because the patients included in this study may have been in good enough general condition to undergo ERCP despite their age.

With the aging society, ERCP in elderly patients will increase in proportion, and these patients are likely to have at least one comorbidity. Therefore, this study is meaningful in that it identified patient comorbidities and predicted the risk of adverse events after ERCP. However, as all-cause mortality in elderly patients can increase after ERCP, it is important to remember that not only the treatment of diseases that require ERCP, such as biliary stone disease or cholangitis, but also the management of comorbidities is important for improving patient prognosis.

Conflicts of Interest

The authors have no financial conflicts of interest.

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