1261 Efficacy of frailty to predict postoperative outcomes in geriatric patients: A meta-analysis

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Background and Goal of Study

Frailty is a clinically recognizable state of increased vulnerability, which was resulted from age-associated declines in physiologic reserve and function across multiple organ systems. In frail population, the capability to deal with daily life stressors is compromised. Evaluation of the frailty status has recently become as a considerate factor for the estimation of perioperative risk in elderly population. Many studies have investigated the correlation between frailty and post-operative (post-op) outcomes. Though most of these studies suggest that frailty is a risk factor of having poor post-op outcomes in geriatric patients, meta-analysis data in this regard remain lacking. We thus conducted this meta-analysis to elucidate further.

Methods

We searched Medline/PubMed and Embase (from inception until October, 2017) for studies comparing the post-op outcomes of frail and non-frail geriatric patients (denoted as the Frailty and the Non-frailty groups, respectively). We included both prospective and retrospective cohort studies using modified frailty index as the sole frailty measurement tool. The outcomes included post-op mortality, major complication (Clavien-Dindo classification III/IV), length of hospital stay (LOS) and discharge to a skilled or assisted-care facility.

Table 1 Mortality

Table 3 Length of hospital stay

Results

A total of 141 titles were obtained from our search. After removing duplicates, screening the eligibility and full text, a total of 16 studies were included for data analysis. For post-op mortality, the meta-analysis showed that the risk of having post-op mortality of the Frailty group was significantly higher than the Non-frailty group (Odd's ratio [OR]=3.26, 95% confidence interval [95%CI] =2.41~4.41; P<0.001)(**Table 1**). For major complications, the meta-analysis revealed that the Frailty group also had a higher risk of having post-op major complications than the Non-frailty group (OR=2.73, 95%CI=2.19~3.40; P<0.001)(**Table 2**). For LOS, the result showed that Frail group had a significant longer LOS (OR=2.23, 95%CI=1.89~2.63; P<0.001)(**Table 3**). The risk of discharge to a skilled or assisted-care facility of the Frailty group was significantly higher than the Non-frailty group, too (OR=2.82, 95%CI=2.52~3.12; P<0.001)(**Table 4**).

Conclusion

This meta-analysis study confirmed that frailty, identified by modified frailty index, can predict post-op outcomes in geriatric patients.

Table 2 Major complication

Table 4 Discharge to a skilled/assisted-care facility