Abstract

Background

The postoperative survival rate of patients with esophageal squamous cell carcinoma (ESCC) remains poor compared with other gastrointestinal cancers. We hypothesized that skeletal muscle loss in the postoperative acute phase might be a new predictor for long-term prognosis after highly invasive surgery such as ESCC surgery.

Methods

The following items were retrospectively investigated. First, whether skeletal muscle loss occurred in the postoperative acute phase of ESCC was verified. Second, the preoperative and intraoperative factors involved in skeletal muscle loss in the postoperative acute phase of ESCC were investigated. Then, whether skeletal muscle loss in the postoperative acute phase affected long-term prognosis was examined. The medical records of consecutive patients who underwent radical esophagectomy for ESCC between January 2010 and June 2015 were retrospectively reviewed; 72 cases were eligible for this study. The total psoas major muscle mass index (TPI) at the level of the third lumbar vertebra (L3) was measured using computed tomography (CT) before surgery and three days after surgery. The long-term prognosis was estimated by the Kaplan-Meier method and the multivariate logistic regression model.