Intravenous iron supplementation may be superior to observation in acute isovolemic anemia after gastrectomy for cancer.

Abstract:
To determine whether the application of post-operative intravenous (IV)-iron for acute isovolemic anemia after gastrectomy for cancer may be effective. Among 2078 gastric cancer patients who underwent surgery between February 2007 and August 2009 at the National Cancer Center Korea, 368 patients developed post-operative anemia [hemoglobin-(Hb)-level < 9 g/dL] within the first postoperative week. Patients requiring transfusions were excluded. IV-iron was administered to 63 patients (iron group). Sixty patients were observed without treatment (observation group). The clinical outcomes of the groups were compared concerning clinicopathologic data, morbidity, and changes in Hb levels using Fisher’s exact test, Student’s t-test and the Z-test. The initial Hb level was higher in the iron group than in the observation group (7.3 ± 1.0 g/dL vs 8.4 ± 0.5 g/dL, P < 0.001). The slope of the changes in the Hb level was significantly higher in the iron group than in the observation group (0.648 ± 0.054 vs 0.349 ± 0.038, P < 0.001). The Hb level 1 and 3 mo post-operatively increased from 10.7 ± 1.3 to 11.9 ± 1.3 g/dL in the iron group (P = 0.033) and from 10.1 ± 1.0 to 10.8 ± 1.4 g/dL in the observation group (P < 0.001). The postoperative hospital stay was significantly longer in the iron group than in the observation group.
group (10.5 ± 6.8 d vs 7.6 ± 5.5 d, P = 0.011). There were no significant differences in the major and surgical complications between the groups (6.3% vs 13.3%, P = 0.192; 9.5% vs 3.3%, P = 0.164). IV-iron supplementation may be an effective treatment for post-operative isovolemic post-gastrectomy anemia and may be a better alternative than observation.