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Adverse Effects of Morphine and Fentanyl for Stomatitis in Patients Receiving Allogeneic Hematopoietic Cell Transplantation—A Single Center Retrospective Analysis

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ABSTRACT

Opioids are widely used as analgesics for oral mucositis in allogeneic hematopoietic cell transplantation (allo-HCT). Their main adverse events are nausea, vomiting, constipation, psychological symptoms, and respiratory depression. In our institute, continuous intravenous morphine was generally used until 2007, followed by intravenous fentanyl as the first-line agent because of its potential fewer adverse events. We retrospectively analyzed 99 patients who underwent allo-HCT in the University of Tsukuba Hospital from 2004 to 2009. Out of 99 patients, 64 were treated with opioids (morphine, 32 and fentanyl, 32). The attending physicians were in charge of providing stable pain control. Median age, sex, stem cell source, preparative regimen, and GVHD prophylaxis were similar in the two groups. There were no significant differences in psychological symptoms, drowsiness, nausea, and vomiting in both groups. Defecation ratio (the days having a bowel movement/the days taking opioids) was 63% and 94% in the morphine and fentanyl group, respectively ($P < 0.0001$). The percentage of patients who needed to use purgative drugs was 25% and 6% in the morphine and fentanyl group, respectively ($P = 0.04$). It is suggested that fentanyl has less adverse effects on gastrointestinal movement and is safer than morphine when used for oral mucositis in allo-HCT.

KEYWORDS

Stomatitis; Morphine; Fentanyl; Allo-HCT; Constipation

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