

A case of chest wall rigidity syndrome due fentanyl patch in advanced lung cancer patient

Keehyun Lee, Jinjin Kim, Jong-Yul Jin

Department of Hematology and Oncology, Holy Family Hospital, Catholic University of Korea, Korea

Fentanyl, a phenylpiperidine derivative is a synthetic opioid agonist with rapid onset and short duration. Fentanyl patch is a strong opioids commonly used in chronic cancer pain patients. Large doses of intravenous opioids may cause severe rigidity and prevent spontaneous or controlled ventilation. Chest wall rigidity is a common complication of potent opioids given as bolus injections, most often as anesthetic induction agents. A few cases were reported with Intravenous fentanyl administration and developed chest wall rigidity syndrome. But there was any reports with chest wall rigidity syndrome after using fentanyl patches in adult cancer pain patients. Here we present a case of chest wall rigidity syndrome due to fentanyl patches in a advanced lung cancer patients.

A 58-year-old Asian male patient was admitted to our hematology & oncology department for a scheduled chemotherapy. He had been diagnosed small cell lung cancer with extensive stage 1 year ago. Since then, he had been treated with chemotherapy using irinotecan and cisplatin. The status of his disease is showed partial response. But this time, he complained severe shoulder pain. So we started treatment to pain control with NSAID and mild opioid and then with fentanyl patches. According to the NCCN guidelines, we increased the dose of fentanyl patches with the numeric rating scale of patient's pain. The fourth hospital day, up to 250ug/h of fentanyl, he lapsed into a stupor and became rigid and apneic, His pupil size was pin-pointed. Although naloxone intravenously injected, the rigidity was not recovered, even if consciousness, respiratory rate and pupil size were all normalized. Manual ventilation with a self-inflating band and face mask system did not result in any effective chest wall movement. So we applied the control assist ventilator and we tried opioid-rotation to IV morphine. After that the rigidity was subsided.