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Abstracts

PS3-16
Possible effect of blonanserin transdermal patch on the antiemetic control in patients with abdominal or pelvic tumors
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Background: Malignant bowel obstruction (MBO) is a common complication in advanced cancer, especially in patients with abdominal or pelvic tumors. MBO provokes severe symptoms including nausea, vomiting and abdominal pain, which are frequently difficult to control. Haloperidol, which blocks dopamine 2 (D2) receptor, is commonly prescribed for the treatment of MBO-related nausea and vomiting. However, it is difficult for patients with digestive symptoms to take orally and intravenous administration restricts the treatment of MBO-related nausea and vomiting. However, it is difficult for patients with digestive symptoms to take orally and intravenous administration restricts the treatment of MBO-related nausea and vomiting. Hence, a novel antiemetic agent is needed.

Aims: To investigate the safety and efficacy of a transdermal patch of blonanserin in patients with abdominal or pelvic tumors who experienced severe nausea and vomiting and had difficulty with oral and intravenous administration.

Methods: Blonanserin is an atypical antipsychotic drug with high affinity and selective antagonism for D2 and D3 and serotonin 5-HT2A receptors. Recently, blonanserin transdermal patch is the first transdermal formulation developed for the treatment of schizophrenia, and widely used for its treatment.

The objectives of the study were to determine: 1) the antiemetic efficacy, 2) the safety and tolerability, and 3) the patient's satisfaction of blonanserin transdermal patch in the patients with abdominal or pelvic tumors.

Results: Ten cases with MBO by gastric, pancreatic, colorectal or ovarian cancers presented severe nausea and vomiting after discharge from hospital. Because of their digestive symptoms or patients needs (hope to continue home care), it was difficult to start oral or intravenous administration of antiemetic agents. Therefore, after agreement by patients and their families, we began blonanserin transdermal patch at 20 or 40 mg per day. Soon after this treatment began, the symptoms of the patient rapidly lessened and their appetite were slightly improved.

Conclusions: Blonanserin transdermal patch seems to be a promising and novel antiemetic agent for the treatment of patients with MBO. We should evaluate its safety and efficacy by clinical trials for patients with MBO.

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PS3-2
An analysis of trends in tele-prescription of anticancer agents during the COVID-19 pandemic
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Background: The COVID-19 has affected the cancer treatment strategy. Various academic societies, such as ASCO, ESMO, and JSMO, have issued statements on cancer treatment under the COVID-19 pandemic, recommending regimens that include oral agents and less frequent visits. Furthermore, on April 10, 2020, the Ministry of Health, Labour, and Welfare of Japan announced that medical treatment and medication counseling online and by telephone are covered by health insurance. In Japan, there are some reports of teledicine in the treatment of psychiatric disorders and epilepsy; however, no reports in the field of oncology. The purpose of this study was to collect data for safe treatment under the COVID-19 pandemic by clarifying the trends of oral anticancer drugs prescriptions.

Methods: We surveyed 5483 patients who came to our hospital (Miyagi Cancer Center, Natori, Miyagi, Japan) and received at least one prescription for oral or topical medication during April-June 2019-21. In addition, the age, gender, residence (by medical area), whether the patient got tele-prescriptions, and name of prescribed medication were surveyed and compared annually. This study was approved by the Miyagi Cancer Center Ethical Review Committee (Approval No.: 2021-014) and was supported by JSPS Grant-in-Aid for Encouragement of Scientists 21H04181.

Results: Of all patients who received out-of-hospital prescriptions, the proportion of patients who received tele-prescription in April-June 2020 and 2021 was 5.8% and 4.2%, respectively, and was highest when the first emergency declaration was issued in Miyagi Prefecture. Regarding the characteristics of patients, there were significantly more females who received tele-prescription in 2020. The difference was not significant difference between elderly and non-elderly patients. There was a tendency for patients living farther away from our hospital to have a higher proportion of tele-prescriptions, but this was not statistically significant.

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PS4-9
Synergism of benzyl isothiocyanate with quercetin, caffeic acid and caffeine to kill cancer cells: Who cares?
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Synergism of the bioactive compounds from our daily dietary sources potentially boost the efficacy of cancer treatment. In this study, the concept of synergism was adapted by combining benzyl isothiocyanate (BITC) with quercetin, caffeic acid (CA) and caffeine as our novel synergism model to determine the synergistic cytotoxic effects on human breast adenocarcinoma (MCF-7) cells via elucidation of antioxidant responses, MAPK and apoptotic pathways.

The MCF-7 cell viability tests were evaluated using MTT assay and acridine orange/ethidium bromide (AO/EB) fluorescence imaging. We determined the protein expression of glutathione-5-transferase (GST), p38, ERK1/2, p-ERK, Nrf2 and Bcl-2 by Western blotting. Glutathione (GSH), reactive oxygen species (ROS) and caspase 3/7 level were measured fluorimetrically.

Based on the results, BITC increased the ROS level to induce MCF-7 cell death while combined treatments decreased the ROS level, but synergistically boosted the death that was selective on MCF-7 cells compared to the treatment on normal human fibroblast ORL-2522 cells. In addition, the combined treatments showed the activation of antioxidant responsive elements (AREs) by the tight regulation of Nrf2 protein expression. Both single and combined treatment activated the MAPK signalling pathway via the regulation of p38 and ERKs. GST catalyzed the conjugation of GSH with the bioactive compounds for detoxification xenobiotic metabolism caused depletion of free-GSH. Further, the upregulation of Bcl-2 expression is a counteract response to suppress the release of cytochrome c that leads to a significant increment of caspase 3/7 level to further cascades of cell death.

In conclusion, the synergism between BITC with quercetin, caffeine, and CA is associated with tight regulation of Nrf2, MAPK pathway, and disruption of the cellular redox-thiol homeostasis to further cascades the death of MCF-7 cells. Could synergism of phytochemicals integrate with precision medicine?

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PS5-2
Ileostomy closure within 6 months after anterior resection for patients with indication of adjuvant chemotherapy
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Background: Performing temporary ileostomy to protect a distal anastomosis is regarded as a manner for minimizing the risk of anastomotic leakage and lessening the rate of urgent reoperation. However, the optimal time of ileostomy closure remains controversial due to rare evidence and available data, especially for patients who require postoperative adjuvant therapy. This study aimed to assess the feasibility and safety of performing ileostomy closure within 6 months after anterior resection for rectal cancer patients with indication of adjuvant chemotherapy.

Methods: Data were collected from January 2012 to December 2019 and 150 cases were finally included. Patients were divided into an early closure group (EC group less than 6 months) and a late group (LC group more than 6 months), based on the timing of stoma reversal following the initial surgery. Patient characteristics, stoma related complications, postoperative complications, and long-term bowel function were compared.

Results: A total of 150 patients with were finally identified. The median time of interval between stoma formation and closure was 200 days (range from 21 to 573). Although overall perioperative morbidity was similar between groups, the EC group showed less risk of stoma stenosis (p=0.081), total postoperative complications (p=0.072), and ileus (p=0.075) without statistical significance for patients with neoadjuvant therapy. Moreover, the postoperative length of hospital stay was significantly shorter (p=0.012) in the EC group for patients without neoadjuvant therapy. Finally, a total of 124 LARS score questionnaires were available and analyzed, indicating that the long-term bowel function of both groups was comparable.

Conclusions: Our results suggested that prolonged ileostomy closure showed no benefit in the prevention of perioperative outcomes and long-term bowel dysfunc-

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