

Intraperitoneal Chemohyperthermia versus Intraperitoneal Chemotherapy in Treatment of Patients with Malignant Ascites

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Abstract

Background and study aim

There is a theoretical potential to increase exposure of tumor cells to antineoplastic agents by delivering it intraperitoneally. Hyperthermia has been used to augment cancer treatment for decades. Hypothetically, combining both methods together should maximize the toxic effects of chemotherapy. In this study intraperitoneal chemotherapy was compared to intraperitoneal Chemohyperthermia regarding the effect on viability of malignant cells in ascitic fluid cytology. Body weight and abdominal girth were used as clinical parameters for ascites regression.

Patients and methods

40 Patients with malignant ascites were recruited. Patients were alphabetically randomized into 2 groups; group 1 included 20 patients who were treated using intraperitoneal chemotherapy. Group 2 included 20 patients who were treated with intraperitoneal Chemohyperthermia.

Results

Viable malignant cells were significantly lower in group 2 than in group 1 in the first, second, third and fourth week of follow up of the two groups. Degenerative and necrotic cells were significantly higher in group 2 than in group 1 during the same follow up period. Body weight and abdominal girth in group 2 and in group 1 four weeks after the procedure were significantly decreased. Self-limiting adverse effects as abdominal pain, anorexia, vomiting, constipation and low grade fever were observed in cases of Chemohyperthermia which were relieved by third day. Impairment in kidney functions as shown by increased creatinine occurred in some patients in group 1.

Conclusion

Intraperitoneal Chemohyperthermia can affect the viability of malignant cells in patients with malignant ascites with minimal self-limiting side effects than intraperitoneal chemotherapy alone. It also improves patient's quality of life due to regression of ascites.