

Study on cellular immune function of advanced alimentary tract cancer in perioperative period

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Abstract

AIM: To study the immune functions of patients with alimentary tract cancer in the perioperative period.

METHODS: In our study, T cell subsets and NK cells (NKC) in the peripheral blood were tested in 133 alimentary tract cancer patients, including 102 treated with radical surgery and 31 unresectable patients in the perioperative period.

RESULTS: There were a higher level of CD8+ ($P < 0.05$) and a lower level of NKC, CD3+ and CD4+ ($P < 0.01$). Ratio of CD4+/

CD8+ cell was reduced in patients before and surgery compared with those in normal subjects ($P < 0.05$). The results showed that cellular immune function of patients was significantly depressed, and further depressed one week after operation. This means surgery and anesthesia can damage the immune function of the patients. The levels of CD3+, CD4+, CD8+, CD4+/CD8+ and NKC in patients with radical treatment were higher before surgery than those three week after operation ($P < 0.05$). This demonstrated that removal of cancer led to the elimination of TDSF. There is no change for patients with unresectable cancer which indicated the immune function was depressed seriously.

CONCLUSION: (1) It is suggested that alimentary tract cancer must be treated with radical surgery, and advanced cancer should be treated with palliative surgery. So the load of cancer and TDSF could be eliminated or reduced. (2) Surgery and anesthesia may impair the immune function. So lessening influence from surgery and anesthesia so as to restore cellular immune function of the patients is of great importance for treatment.

Key words: Digestive system neoplasms/immunology; Digestive system neoplasms/surgery; Immunity, cellular; Intraoperation period

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