

Does neural cell adhesion molecule-180 predict survival in colorectal cancer?

November 2 2007

When a person learns they are suffering from cancer, the first question in their mind is always: "How much time do I have?" Unfortunately, this is a question to which the researchers have long been seeking an absolute answer. Tumor progression to local invasion and metastasis are the most relevant processes for prognosis, and predictive factors for survival are sometimes the only hope for cancer patients. Tumor suppressors and adhesion molecules represent one of the primary challenges in cancer therapy.

NCAM is an embryologic adhesion molecule suggested to be a significant factor for survival in patients with various solid tumors. A correlation between reduced NCAM expression and poor prognosis has been reported for some cancer types. The existence of NCAM-180 has been proposed to function as a tumor suppressor in colon carcinoma.

However, no prospective research has yet been conducted to evaluate the prognostic value and the frequency of NCAM-180 in colorectal cancer. Yet cancer patients and their families obviously want to know if they can recover from this miserable disease or what they may experience during its clinical course.

A research article published on November 7 in the *World Journal of Gastroenterology* addresses this question. The research team, led by Dr. Tascilar from Zonguldak Karaelmas University, investigated the frequency of NCAM-180 expression and the effect of its existence on clinical course in 26 patients suffering from colorectal cancer over a

period of 4 years.

One conclusion reported by the investigators is that NCAM-180 expression was determined in only one patient with stage II cancer, with an uneventful clinical course during a follow-up period of 30 months. However, the overall rate was only 3.84%, and statistical correlation analysis of survival with NCAM-180 expression was not possible due to this low frequency.

Another interesting conclusion is that a comparison according to tumor differentiation and stage revealed that loss of NCAM-180 expression, in either well-differentiated or stage II cancer, did not result in a worse clinical course in other patients.

The authors conceded that as a consequence of the limited number of cases in their series, it might not be possible to make a generalization. Nevertheless, routine use of NCAM-180 expression as a prognostic marker for colorectal carcinoma does not seem feasible or cost-effective in clinical practice, due to it being present at a very low frequency.

The most critical deficit in the ability to treat cancer effectively is the lack of knowledge about cellular basis and markers for early diagnosis. The verification of an association between various types of malignancies and adhesion molecules might provide new targets in cancer therapy by indicating the accurate goals. Further studies with a greater number of cases are thus called for, to study the underlying mechanisms of tumor metastasis and prognosis in colorectal carcinoma.

Source: World Journal of Gastroenterology

Citation: Does neural cell adhesion molecule-180 predict survival in colorectal cancer? (2007,

November 2) retrieved 5 May 2023 from <https://medicalxpress.com/news/2007-11-neural-cell-adhesion-molecule-survival.html>

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