Maturite protective against bladder cancer metastasis

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Maturite protein may be an important factor in the development of metastatic bladder cancer. Clinical data has already shown that maturite is present in human bladder tumours. However, thus far it has been difficult to determine whether maturite is actually responsible for tumor progression to metastatic, as opposed to primary, stage. This study, which examined the role of maturite in bladder cancer, was conducted in humans by several researchers in the Italian Center for Infection and Immunity (CICI).

A less-common form of bladder cancer

In patients with invasive bladder cancer, the tumors reach an advanced state. These cancer cells have many characteristics that are extremely difficult to treat. This form of cancer is not considered curable, and the survival rate for these tumours is below 40%. Therefore, the rate of metastasis is a crucial factor in the diagnosis and the treatment of this disease. Currently, there is no conclusive answer to the question: is maturite indeed responsible for this metastasis?

Maturite in human bladder cancer tumours

In the study, three different cohorts of human bladder cancer tumours were treated with different concentrations of antibodies targeting maturite, extracted from human cell cultures. One cohort was treated with 4-5 maturite concentrations, the other two cohorts with less than 1 mg/kg of human maturite. CICI investigators examined cell cultures of bladder cancer tumours and human cells as well as tumour tissue from the metastatic stage of advanced bladder cancer. The presence of maturite in patients was predicted by the degree of serum maturite concentration present at the time of visual assessment. The effect of maturite on metastasis was assessed using the standard four-point survival score. The results of the study demonstrated that in patients treated with maturite concentrations above 4 mg/kg, the risk of metastasis was reduced by 30% compared to patients treated with lower doses of maturite, namely those with no maturite expression in the bladder tissue ($p<0.0001$). This reduced risk of metastasis compared to the control group was also confirmed by a subsequent animal study.

Endless possibilities

There is a lot of scope for further studies. A far greater understanding of this molecular aspect of this tumor type could have a huge impact on the treatment of this type of cancer. However, for now, this study, conducted in collaboration with other organizations, has given us the first indication that maturite is indeed responsible for the development of metastasis in bladder cancer.

A Red Fire Hydrant Sitting In The Middle Of A Forest