

dependent manner. It was also shown that the cell death was enhanced through the HDAC6 inhibitory activity of RCS.

3-6.

Interaction between Arginase-1-positive bone marrow-derived cells and CD3-positive T cells in the primary lesion of colorectal cancer

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【Background and objectives】 It is well known that focal immune response by cytotoxic T-lymphocyte (CTL) in primary site of colorectal cancer is associated with the prognosis. Besides, a new therapeutic strategy by checkpoint inhibitors achieved remarkable results. Based on these findings, cytotoxic immune reaction by CTL is generally regarded as the main contributor of anti-tumor immune response.

As another aspect, various types of mesenchymal cells or bone marrow derived cells are distributed in the primary site of colorectal cancer. We evaluated representative mesenchymal/ bone marrow derived cells as well as CD3 positive T cell infiltration. Furthermore, we also aimed to assess the arginase-1, which is regarded as a key factor to fulfill immunosuppressive functions, in those bone marrow derived cells.

【Methods】 Colorectal cancer patients that were diagnosed with Stage II or III were enrolled. Surgically resected formalin-fixed paraffin embedded cancer tissue specimens of 106 patients who underwent radical surgery at Tokyo Medical University Hospital from January 1, 2005, to December 31, 2014 were adopted. Fluorescent multiplex immunohistochemistry were performed using Primary antibodies including CD15, CD11b, CD163, CD68, Arginase-1, and CD3. SPSS ver.27 software program was adopted for statistical analyses.

【Results】 In the group with larger number of CD3 positive T cell infiltration accompanied significantly favorable overall prognosis. In the subgroup with larger numbers of Arginase I positive cell infiltration, CD3 positive lymphocyte infiltration associated with prolonged overall survival, while the number of CD3 positive lymphocyte is not correlated with prognosis when smaller number of arginase 1 positive cells are infiltrated.

As for bone marrow derived cell infiltration, in the subgroup with higher number of CD11b, CD163, or CD68 positive cell infiltration regardless of the Arginase 1 expression, the overall survival rate was significantly better in the group with higher number of CD3 positive lymphocyte infiltration.

For CD15 positive neutrophils, that are also derived from bone marrow, it was found that the overall prognosis is not correlated with the degree of CD3 positive lymphocyte infiltration when higher number of CD15 positive cells with arginase 1 expression are distributed in cancer stroma. On the other hand, in the subgroup with smaller number of CD15 positive neutrophils with arginase 1 expression, marked CD3 positive lymphocyte infiltration is associated with favorable prognosis.

【Discussion and conclusions】 Among the various subsets of bone marrow-derived cells, CD15-positive neutrophils with arginase 1 expression may suppress the anti-tumoral function of CD3-positive T cells.

3-7.

Beneficial effects of transdermal administration of tamoxifen on capsular contracture after breast implantation in experimental animals

(社会人大学院博士課程4年乳腺科)

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