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Tumor endothelial marker in cancer

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Tumor endothelial marker 1 (TEM1; also known as endosialin or CD248) is a protein found on tumor vasculature and in tumor stroma. Here, we tested whether TEM1 has potential as a therapeutic target for cancer immunotherapy by immunizing immunocompetent mice with TEM1 cDNA fused to the minimal domain of the C fragment of tetanus toxoid (referred to herein as Tem1-TT vaccine). TEM1-TT vaccination elicited CD8+ and/or CD4+ T cell responses against immunodominant TEM1 protein sequences. Prophylactic immunization of animals with TEM1-TT prevented or delayed tumor formation in several murine tumor models. Therapeutic vaccination of tumor bearing mice reduced tumor vascularity, increased infiltration of CD3+ T cells into the tumor, and controlled progression of established tumors. TEM1-TT vaccination also elicited CD8+ cytotoxic T cell responses against murine tumor-specific antigens. Effective TEM1-TT vaccination did not affect angiogenesis-dependent physiological processes, including wound healing and reproduction. Based on these data and the widespread expression of TEM1 on the vasculature of different tumor types, we conclude that targeting TEM1 has therapeutic potential in cancer immunotherapy.

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The role of the bone marrow examination in the diagnosis of hematological malignancies in limited resource centre

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Objective: To evaluate the frequency of involvement of bone marrow with hematological disorders and to observe the significance of bone marrow examination in diagnosis and prognosis of patients admitted and attended Aden Hematology-Oncology Center with limited resources. Bone marrow aspiration was the most effective method for studying morphological details and was able to diagnose most of the cases except cases with myelofibrosis and severe pancytopenia which yielded dry tap for which trephine biopsy was diagnostic.

Method: This was a retrospective study from January 2013 to December 2014.

Results: A total of 260 pathological BME were recorded from patients aged 1 year to 80 years with a mean age of 34.8 years and M:F ratio of 1.4:1 The main findings were acute lymphoblastic leukemia (ALL) 25%, acute myeloblastic leukemia (AML) 21.5%, chronic myeloid leukemia (CML) 20%, malignant lymphoma in 10% and myelodysplastic syndrome (MDS) in 9.6%.

Conclusion: Both bone marrow aspiration and biopsy was found to be complementary to each other and play an important role in diagnosis of hematological malignancies in centers with limited resources.

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