Commentary

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A Short Commentary on Myelodysplastic Syndrome

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Introduction

Myelodysplastic syndrome refers to a complex group of closely related clonal hematopoietic disorders that are more common in the elderly. They are all characterized by one or more blood cytopenias. MDS is a group of problems in which bone marrow cells do not grow into mature blood cells. Instead, these cells reside inside the bone marrow in a mature state. Bone marrow is usually hypercellular, but it is rarely seen in the hypocellular context that mimics aplastic anaemia. Bone marrow cells exhibit disruptive morphology and maturation (dysmyelopoiesis), leading to abnormal production of blood cells.

MDS affects hematopoiesis at the stem cell level, as evidenced by cytogenetic abnormalities, cell mutations, and morphologic and physiologic abnormalities in the maturation and separation of one or more hematopoietic cell lines. There are many types under MDS. Some conditions are mild, while others are more severe, and have a higher risk of developing acute myelogenous leukemia (AML). The type you have, and the size of your case, depends on many factors, including how much your blood count and any genetic mutations you have in your bone marrow. Patients with MDS are mainly elderly people suffering from associated diseases. Therefore, various techniques have been used to treat patients with MDS. Instead of providing treatment, the main goals of treatment in patients with MDS are usually to improve hematopoiesis and ensure age-related health quality. Low-dose therapies, defined as treatments that allow for patient management, and are often targeted at patients with low-risk MDS (IPSS low and intermediate-1).

Such strategies are not associated with advanced survival or survival that does not continue.

Patients with high-risk MDS (IPSS intermediate-2 and high) require intensive treatment (anti -ukemic chemotherapy and / or stem cell transplantation) to eradicate expanded clonal cells and form hematological responses. Because of the middle age of patients with MDS, only about one-third of patients at high risk of MDS may receive intensive cytotoxic treatment. In patients who do not qualify for intensive treatment, diagnostic tests for pressure, separation, or elimination of a deadly clone are investigated.

The bone marrow of people with MDS contains an unusually high number of arteries. This has led to the investigation of angiogenesis inhibitors, such as SU5416 and thalidomide, as well as vascular endothelial growth factor (VEGF) inhibitors for individuals with AML or MDS. Thalidomide was originally developed as a "sleeping pill," but was found to be effective in treating patients with multiple myeloma. In MDS, treatment with thalidomide as a single agent resulted in 30% -40% of MDS patients exhibiting a hematopoietic response, often enhancing erythropoiesis. Additional studies of antiangiogenetic drugs, including the new thalidomide analogue CC-5013 (Revimid, Celgene, Warren, NJ) may be effective in the prevention of patients with 5q-syndrome (A. List, personal contact), and ongoing anti-TNFα treatment regimens.

Farnesyl transferase inhibitors have shown vivo effectiveness in treating patients with AML, possibly by blocking the Ras pathway. The role of these agents in treating high-risk patients with MDS who do not qualify for intensive treatment has not yet been established, but could be a viable option in the future.

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Conflict of Interest

The author declared that there is no conflict of interest.