Myelodysplastic syndrome- case report

Dr. Pârvu Andrada[1], Conf. Dr. Bojan Anca[1], Conf. Dr. Cucuianu Andrei[1], Dr. Vincent Ribrag[2]
1- "Iuliu Haţieganu" University of Medicine and Pharmacy, Cluj- Napoca, Romania
2- Institut de Cancerologie "Gustave Roussy", France

Patient demographics:
- Age: 61 years
- Sex: F
- Occupation: physician
- Residence: urban

Case history:
- The patient presented for a grade 1 anemia that persisted for several years but was not investigated
- Family and personal disease history: no diseases
- Working and life conditions: appropriate
- Risk factors: none

Disease history:

• July 2004: : Present illness had a slow onset with the hemogram showing a mild anemia with no further workup. The disease started insidious, the hemogram showed mild anemia that wasn't investigated etiologically. At initial presentation in our hospital (Oncological Institute, Hematology Department, Cluj-Napoca, Romania), pertinent findings were pallor, moderate anemia with macrocytosis the patient presented pallor, medium anemia, macrocitosis(Hb=9,5 g/dl, VEM=100 fl), the differential showed 1% blasts, white blood cell dysplasia. Bone marrow aspirate: less than 5% blasts, multilinear dysplasia. Bone marrow cytogenetics: complex anomalies: 47 XX, 2q-, 8+, 12q+, 16q-.
• The diagnosis was myelodisplastic syndrome - refractory anemia, IPSS: intermediate-1 risk.

Therapeutic goals: treating anemia, slowing natural progression of disease

Disease course - clinical and laboratory evaluation at follow-ups:

• July 2004 - November 2009: Erythropoetin (conventional doses) and intermittent blood transfusions. Treatment result: decreased fatigue, low-normal haemoglobin values. At the beginning of 2009, anaemia was difficult to be controlled and the percent of peripheral blasts was increased.
• November 2009: the patient was addressed to „Gustave Roussy" Oncological Institute, France. Laboratory examinations: L=3200/mm3, Hb=8,1 g/dl, Tr=67000/mm3, Bone marrow cytogenetic analysis: 46 XX, 7q-. The case was interpreted as RAEB-2, IPSS prognosis score: intermediate-2. The French haematologists recommended 5-azacytidine and reduced-intensity conditioning allogenic stem cell transplantation if there was a response to epigenetic therapy.
• November 2009-April 2010: The patient underwent 4 regimens of 5-azacytidine. The first was full-dose regimen and on the following 3 the doses were reduced at 67% due to post-azacytidine cytopenias and serious infectious complications. The patient continued erythropoetin, granulocyte colony stimulating factor and blood transfusions.
• April 2010: A haematological evaluation was done at "Gustave Roussy" Oncological Institute. Blood cell counting: L=2200/mm3, Hb=9,6 g/dl, Tr=93000/mm3, marrow blasts < 5%. Bone marrow cytogenetics: 46,XX. 7q- is not identified any more by banding technique, but only through FISH. Continuation of 5-azacytidine was recommended, but the patient refused. HLA compatibility with the only brother was tested, but, unfortunately, there was no match. The doctors from "Gustave Roussy" Oncological Institute recommended and wanted to perform unrelated donor BMT, but the patient refused the procedure. Therefore the patient was treated with subcutaneous low dose cytosine arabinoside with no therapeutic result. Erythropoetin, granulocyte growth factor and blood transfusions were continued. In April 2010 ferritin was over 1500 µg/l. We started Deferasirox 20 mg/kg/day in April 2010. After three months of treatment, ferritin decreased at 800 µg/l, but the patient interrupted the treatment herself because of an upper GI bleeding.
• April 2010: The patient developed paraneoplastic Sweet syndrome (acute neutrophilic dermatosis) that was treated initially by corticosteroids followed by Cyclosporine (December 2010-June 2011), but the dermatosis persisted.
• June 2011: Hematology evaluation: Bone marrow aspirate: 35% blasts, MDS evaluated to acute myeloblastic leukemia. The patient died before any treatment could be given.

Conclusions: This clinical case illustrates the definition of MDS as an incurable disease with an unfavourable clinical course. This patient had the cytogenetic markers of a negative prognosis. We administered several therapeutical agents: erythropoetin with granulocyte colony stimulating factor, epigenetic therapy, low dose chemotherapy and substitutive therapy, unfortunately

without a favourable or sustained therapeutic response. Of course, the only curative treatment would be unrelated bone marrow transplantation, but this could be a high risk procedure that the patient refused, but her option represents one of the patient's fundamental rights and the doctors have to respect it.