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ELEVENTH ANNUAL MEETING

ACUTE PROMYELOCYTIC LEUKEMIA MANAGEMENT AND CHALLENGES IN DEVELOPING COUNTRIES

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INTRODUCTION

Acute promyelocytic leukemia (APL) accounts for 10–15% of newly diagnosed acute myeloid leukemia (AML) cases. APL results from a balanced translocation, t(15;17) (q22;q12-21), which leads to the fusion of the promyelocytic leukemia (PML) gene with the retinoic acid receptor alpha (RARA) gene. Morphologically, there are two main cytological variants of APL: the classical hyper granular APL, which represents majority of cases of APL and microgranular variant (M3v), accounting for 15–20% of cases of APL. On immunophenotyping, the pattern of myeloid antigen expression is similar in these two variants of APL. Acute promyelocytic leukemia once the most lethal subtypes of leukemia, is now curable in most cases due to the availability of several effective agents, including all-trans retinoic acid (ATRA), arsenic trioxide (ATO), and anthracycline compounds.

AIM

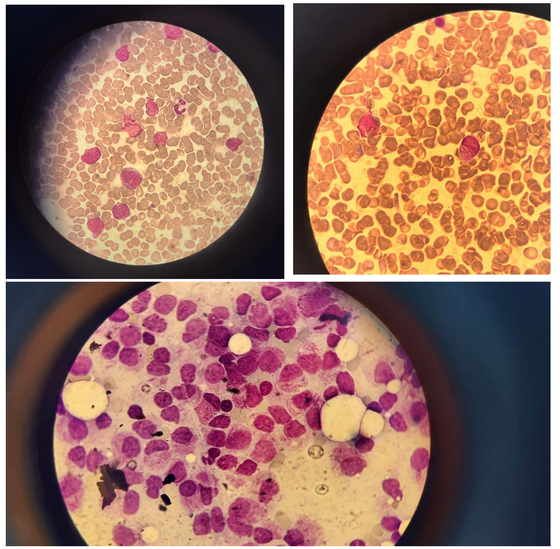
Sharing a case report of Acute Promyelocytic Leukemia and the treatment challenges the developing countries face during its treatment.

DESIGN

Retrospective, case report.

CASE STUDY

A 53-year-old woman was admitted in our clinic with malaise, fatigue and a tendency of bleeding for past few weeks. Diabetic, non-smoker and no history for malignancies. A bone marrow aspiration showed promyelocytes with folded, reshaped nuclei with prominent nucleoli and abundant granular cytoplasm with Aurer bodies in it. A bone marrow biopsy came positive for AML–M3 (CD117(+), CD13(+), CD33(+), MPO(+), HLA-DR(-)). The genetic testing on PML/RARα (t15;17) also came positive. We started the treatment with PETHEMA protocol. A second bone marrow biopsy performed on the 30th day of the induction therapy came back normal. PML/RARα (t15;17) performed on the 60th day of the therapy came back negative. The patient was discharged and advised to provide the consolidation therapy. Unfortunately, since she couldn't provide Idarubicin for the consolidation therapy we faced a clinical dilemma whether to change the anthracycline or not, but based on studies we decided to continue the consolidation treatment with the other anthracycline available - Daunorubicin. The patient is currently on maintenance therapy, showing no signs of disease and in a state of hematologic remission.



CONCLUSIONS

Beside the prolonged diagnostic procedures due to lack of performing those in our clinic and the enforcement of changing the anthracycline due to the lack of drugs provided in our country we were able to successfully treat APL patients like above since 2018 when ATRA became reachable in the local pharmacies. Before that time, we were obliged to send them abroad due to challenges mentioned during treatment. One of the greatest challenges of modern medicine is to introduce proven curative procedures into developing countries to benefit patients of diverse socioeconomic classes. These challenges don't only affect on physicians daily work but also on patients overall prognosis.

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