A Case Of Acute Myelomonocytic Leukaemia In A Parturient Whom Refused The Therapy

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Citation

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Abstract

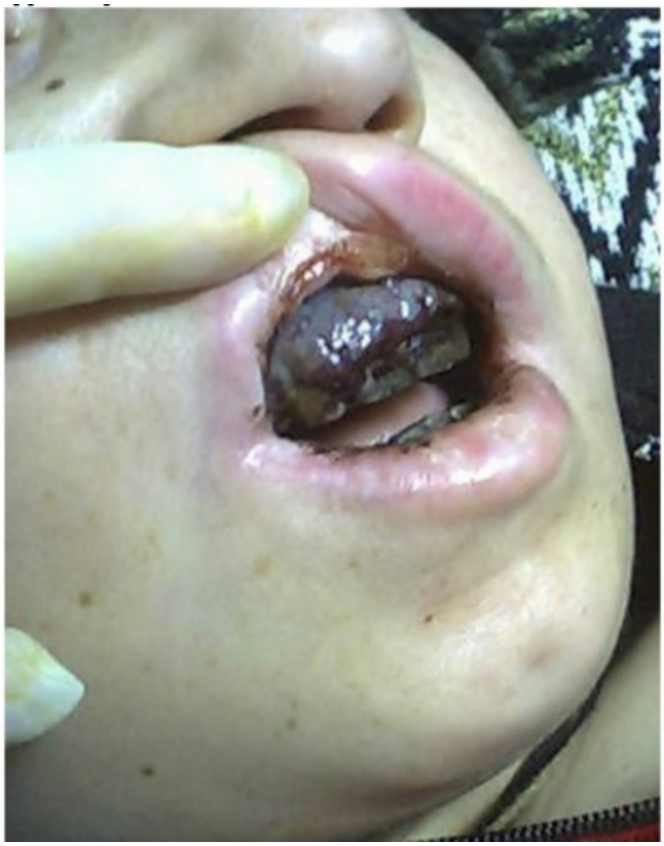
The incidence of acute leukaemia in pregnancy is low and the management is difficult.
A 23-year-old pregnant patient was diagnosed with acute myelomonocytic non-lymphocytic leukaemia (FAB-M4 ANLL) at the beginning of the second trimester. She refused chemotherapy during the pregnancy and the postpartum period. She got a healthy baby with spontaneous vaginal labour. She died after six months of postpartum period.

CASE REPORT

A 23-year-old woman was admitted to the obstetric clinic in her twelfth week of her first pregnancy. She had some complaints such as vaginal hemorrhagia, fatigue, dizziness, fever, cough and purulent sputum for one week. In her history, there were no remarkable findings. Physical examination revealed a temperature of 39°C, heart rate 108 beats/min, arterial blood pressure 110/60 mmHg, prominent gingival hypertrophia (Figure 1), systolic sufl on the apex and lymphadenopathy (2x3 cm) in the left cervical area, and palpable liver and spleen.

Figure 1

Figure 1: Gingival hypertrophia

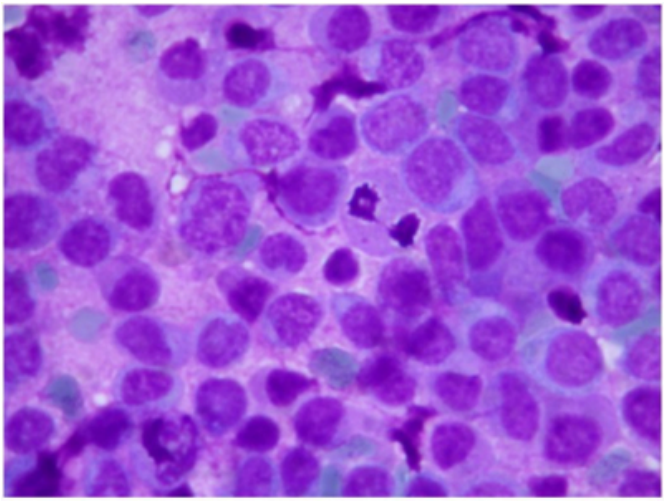


White blood cells were 86x109/L with 80% blast, haemoglobin 7.7g/dl, platelet 26x109/L. Bone marrow aspiration showed infiltration with blastic cells of 95% and myeloperoxidase positivity (Figure 2). Erythrocyte sedimentation rate was 120 mm/h and biochemical analysis showed high lactate dehydrogenase 710 IU/L, aspartate

dehydrogenase 64 IU/L, alanine dehydrogenase 310 IU/L, alkaline phosphatase 354 IU/L and gamma glutamil transferase 584 IU/L.

Figure 2

Figure 2: Bone marrow was infiltrated with blastic cells of 95% and myeloperoxidase positivity.



Flow-cytometric analysis demonstrated that the cells were CD15, CD33 and HLA-DR positive. Chest radiography revealed a left pleural effusion. Abdominal ultrasonograhy revealed hepatomegaly, splenomegaly and intraabdominal effusion. Computerized tomography showed effusion in the left pleural area, hepatosplenomegaly and effusion in the Douglas pouch. The thoracentesis material was hemorrhagic and transudate. The patient was diagnosed with myelomonocytic acute non-lymphocytic leukaemia (FAB-M4 ANLL) according to morphological studies and antigen detecting monoclonal antibodies that were CD15, CD33, and HLA-DR positive. Although, we explain the seriosity of the disease; she refused chemotherapy during the whole pregnancy period and she did not come to the hospital for a follow-up. Her labour was spontaneous with vaginal route, and she had a live and healthy infant at 36 weeks of gestation. She also refused chemotherapy in the postpartum period. Six months later, she was brought to the emergency unit with coma, hypovolemic shock, and multiple ecchymosis in her extremities and gingival bleeding. The therapy was maintained in the intensive care unit. Respiratory depression developed, and she was intubated and mechanically ventilated. She died in the intensive care unit 48 hours later.

DISCUSSION

The incidence of acute myeloid leukaemia (AML) is approximately 2.3 per 100 000 people per year, and the age-adjusted incidence is higher in men than in women (2.9 versus 1.9). There has been no significant change in AML incidence over the past 20 years. FAB-M4 leukaemia composes 20% of all acute myeloid leukaemias ([2]). Patients with AML most often present with non-specific symptoms that begin gradually and abruptly and are the consequence of anaemia, leukocytosis, leucopoenia or leukocyte dysfunction or thrombocytopenia ([2]). In our patient, fatigue, vaginal bleeding and respiratory symptoms appeared since at least one week. Her peripheral blood examinations revealed severe anaemia, leukocytosis, thrombocytopenia and blastic cells accumulation 80%, and 95% blastic cells infiltration seen in the bone marrow aspiration. We diagnosed her as AML with cytochemical analysis (peroxidase, Sudan Black) and flow-cytometric analysis showed AML-M4 in the twelfth week of her first pregnancy.

Acute leukaemia in pregnancy should be treated because its mortality is high, and the therapy may result in complete remission in 76% of such patients ([3,4,5,6]). Twelve term and healthy babies were born in 29 patients with acute leukaemia treated in the first and second trimester. Eighteen premature and 3 stillbirths were seen. Congenital malformation developed in only one baby while no relapses were seen at the long term follow up of the patients ([3]). However, we had scheduled combined chemotherapy with daunurobicine and cytarabine, and explained that spontaneous abortion and stillbirths or a healthy baby born without any malformation could occur, but our patient refused chemotherapy during whole pregnancy and postpartum period. Aviles and Neri, showed that, 84 babies born healthy who have been given chemotherapy in utero in the first trimester without any congenital, neurological, psychosocial problems ([5]).

Some studies reported that the most successful outcomes in treatment of acute promyelocytic leukaemia during pregnancy occurred with all-trans-retinoic acid (ATRA). Although known to exhibit severe teratogenic effects during the first trimester of pregnancy, ATRA seems to be reasonably safe during the second and third trimester ([7,8,9]). Hydroxyurea and A-interferon therapy is successful and also safe in chronic myeloid leukaemia ([10,11]). The change of myelodysplastic syndrome into acute leukaemia is accelerated in pregnancy ([12]). A vertical transmission to the foetus was reported in an acute monocytic leukaemia case ([13]). Another case showed spontaneous remission of acute leukaemia after the termination of pregnancy ([14]).

CONCLUSION

In conclusion, although our patient refused therapy, the care of a pregnant woman with acute leukemia is feasible and it needs a multi-specialist effort that is easier to be achieved in a tertiary care institution.

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