DISCHARGE SUMMARY

Hadassah Medical Organization

Record No: 9276997 - 4 **Name:** MOSENZHEV MAKSIM **Date of admission :** 27/06/2013

Address: DDDD **Born:** 1996 **Date of discharge:** 27/06/2013

Gender: MALE **Department:** ADMINISTRATIVE UNIT

DIAGNOSIS

- ACUTE MYELOID LEUKEMIA, MINIMALLY DIFFERENTIATED, M0
- HEMORRHAGIC CYSTITIS
- S/P ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLAN WITHOUT PURGING
- PNEUMONIA IN ASPERGILLOSIS
- MENINGOENCEPHALITIS DUE TO TOXOPLASMOSIS
- CMV REACTIVATION

PERSONAL STATUS

17 years old, student

MAIN COMPLAINT

Follow up after allogeneic transplantation for refractory acute myeloid leukemia

PRESENT ILLNESS

Maksym was diagnosed with AML on 12.2011. He was treated with induction protocol according to the AML-BFM protocol. He failed to respond and received a salvage protocol (HAM). Unfortunately, he had no response to this treatment either and the treatment was complicated with severe pneumonia. No further curative treatment was offered and low dose SC ARA C was initiated.

With this treatment, upon arrival to Israel he had PR of the AML. On CT scan he had huge pneumonia and transcutaneous biopsy confirmed pulmonary aspergillosis. As his medical condition was so poor, we were not able to give him another salvage protocol and the SC ARA-C was continued along with the initiation of voriconazole.

Under this treatment he had improvement of the pulmonary aspergillosis, but slow progression of the AML.

Since the nature of Maksym's disease is very aggressive and he had no other hope, he was referred for allogeneic bone marrow transplantation. No matched family was found. However, a 10/10 matched unrelated donor was found.

In preparation for transplant, the patient received conditioning protocol including: IV cyclophosphamide (60 mg/kg x 2 days), total body irradiation (2 Gy x 2/d x 3 days) and IV ATG (thymoglobulin 2.5 mg/kg x 4 days). On the July 4th 2012 the patient received allogeneic bone marrow cells from 10/10 matched unrelated donor, AB+ into B+, CMV- into CMV+, male to male. A total of 10x10^8 TNC/kg, in which 7x10^6 were CD 34+ per kilo were infused. To prevent GVHD (graft versus host disease) he received cyclosporine from day -4. In addition, he was treated with mycophenolate mofetil since day +1.

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During his treatment, the patient displayed the following events:
- Engraftment - he had very slow recovery with a maximum WBC count of 0.6 x 10^9/L. On day +20, bone marrow test was done, showing mixed chimera of 40% donor, without AML blasts. The immunosuppressive treatment was stopped and the patient received top up of donor cells (5.2x10^8 TNC/kg, in which 3.6x10^6 were CD 34+ per kilo). The patient later recovered with 100% host hematopoiesis without AML.
- GVHD - no signs of GVHD were evident.
- Infections - before initiation of the conditioning protocol, he had neutropenic fever treated according to the institutional protocols. During the neutropenic period, he developed again fever that was treated with combined wide coverage antibiotics according to our local guidelines. He suffered from CMV reactivation that was treated with foscarnet.
Two months after the transplant he developed fever followed by behavioral changes and tremor. He was diagnosed with CNS toxoplasmosis. he was treated by the combination of clindamycin and pyrimethamine with clinical and MRI improvement.
- Leukemia – as mentioned above, the patient entered to the transplant with activity of AML. Repeated post transplant bone marrow assessments showed complete remission. In order to consolidate the response, he was started on alpha-interferon.

He came for follow up visit. He felt well in the last months. He reports an increase of the creatinine level. Investigation was done that included US (renal stones, kidneys length, blood flow and hydronephrosis not reported), CrCl and protein is not reported.

CURRENT MEDICATION

Name of drug	Dosage	Frequency	Duration	Admin. via	Observations
Interferon Alfa 2a	3 Mln Intr Units	four times weekly	three months	Inj Sol S.C	
Calcium Folinate	15 Mg	once daily	three months	Tab ORAL	
Voriconazole	200 Mg	twice daily	three months	Tab ORAL	
Omeprazole	20 Mg	once daily	three months	Cap ORAL	
Escitalopram	20 Mg	once daily	three months	Tab ORAL	
Acyclovir	800 Mg	twice daily	three months	Tab ORAL	
Ondansetron Hcl	8 Mg	as needed	three months	Tab ORAL	
Resprim F. 800/160	1 Tab	twice daily	three months	Tab ORAL	
Brotizolam	0.25 Mg	once daily	three months	Tab ORAL	

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SENSITIVITIES

information given by: patient

sensitivities as follow:

sensitivity type	description	expression	comments
medicine	Codisal Forte	RASH	

HABITS

Alcohol	Does not drink alcohol
Drugs	Does not use drugs
gymnastics	Yes (Describe)
habits	nothing to mention (Not smoking, Does not drink alcohol and Does not use drugs)
Sleeping	No sleeping problems
smoking	Not smoking

PHYSICAL EXAMINATION

without dyspnea, not pale.
Skin - normal.
No lymphadenopathy. Oral cavity WNL.
Lungs - normal breath sounds.
Heart - S1, S2.
Abdomen - soft, non tender with normal peristalsis, without hepatosplenomegaly.
Normal extremities.

ADDITIONAL TESTS

Bone, trephine biopsy:
Hypocellular (30%) trilineage marrow involved by acute leukemia.
Approximately 50% of the marrow cells stain for c-Kit.

CT - CHEST
INDICATION: FOLLOW-UP FOR PATIENT WITH LUNG ASPERGILLOSIS
COMPARISON IS MADE TO A PREVIOUS EXAMINATION FROM 20.08.12
KNOWN RLL CAVITARY LUNG LESION HAS INCREASED. KNOWN LLL SMALL CAVITARY LESION AND GROUND GLASS OPACITIES RESOLVED. SMALL NODULAR OPACITIES IN THE RML (IMAGE 120/4), RLL (IMAGE 218/4), APPEAR STABLE. NO PLEURAL OR PERICARDIAL EFFUSION IS SEEN. THERE IS NO EVIDENCE OF LYMPHADENOPATHY.
UPPER ABDOMINAL ORGANS APPEAR UNREMARKABLE.
NO BONE DESTRUCTION IS SEEN.

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LABORATORY RESULTS

see attached exam results

Date of test	Name of test	Result	Observations
30/06/2013 14:18	מח עצם		
27/06/2013 09:26	CT: חזה		

COURSE

A 17 years old boy that was treated as written above for refractory AML. His treatment was complicated with pre transplant pulmonary aspergillosis and post transplant toxoplasmosis.

He came for follow up visit. In general, he feels well. He was referred for head MRI, chest CT, and for BM test. CrCl was calculated after urine collection and the results was 90 mL/min.

Under IV conscious sedation, and with local infiltration using lidocain 1%, bone marrow aspiration and biopsy were done. Test were sent for: histology, cytology, FACS, cytogenetics.

As evident by the results of the bone marrow (see above) and the FACS analysis (myeloid blasts that are strongly positive for CD33, CD117 and HLA DR and negative for CD3 and CD19), Maksym is unfortunately in relapse of the leukemia. As he is in good clinical condition, I suggest salvage treatment with clofarabine or azacitidine followed by a second allogeneic transplantation from a different unrelated donor. This should be naturally done as soon as possible.

Doctor: Prof. SHAPIRA MICHAEL YECHIEL **Signature:**_____