

Test Details

Test

HLA (Human Leukocyte Antigen) genes of the Major Histocompatibility Complex (MHC) encodes proteins that differentiates self from non self. It governs innate and adaptive immunity and plays critical role in disease and immune defenses [1]. HLA typing is useful for determining the best match donors for allogenic bone marrow and organ transplantation, disease studies and paternity testing [2, 3]. High resolution NGS based HLA typing is the gold standard for HLA typing [4]. Accurate HLA typing for upto 4-fields, with G group coding for identical nucleotide sequences is done for classical class I HLA genes A*, B*, C* and class II HLA genes DRB1*, DQB1* and DPB1*. This enables careful selection of donors thereby critically improving transplantation outcome [3, 5, 6, 7, 8].

Methodology

DNA extracted from buccal swab was used to amplify the HLA genes of interest by NGSgo kit from GenDx by long-range PCR, followed by fragmentation and library preparation to be sequenced on the Miseq/ NovaSeq Illumina platform. The libraries were sequenced to mean >80-100X coverage on Illumina sequencing platform. The raw sequence reads are aligned using a FASTA-like algorithm. Instead of aligning the reads to a single reference, however, the reads are aligned to all the alleles in the database. The IMGT/HLA database is used as the source of HLA alleles. To determine the SNP haplotypes, every position in the reference is evaluated to define homozygosity or heterozygosity. The heterozygous positions are evaluated to determine the cis-trans relationships (called phasing) between the bases at the individual heterozygous positions. All alleles in the library are compared against the possible haplotypes found in the previous steps. The number of nucleotide mismatches with each allele is determined, as well as the number of mismatches with the determined phasing data. Mismatches at exons and introns are treated separately. A list of alleles is selected with a limited number of mismatches. From these alleles, all possible genotypes are generated which will contain the most likely genotype(s) present in the original dataset. For each of these genotypes, the mismatch level of the two alleles with the phased data is determined. The genotype(s) with the lowest mismatch count is (are) reported [9].

Disclaimer:

- HLA genotypes were determined based on the IMGT/HLA database release 3.52. The occurrence of HLA genotyping results and the number of different allele combinations by a NGS assay for an individual may change according to the version of the IMGT/HLA database release. Please contact MedGenome at a later date for any change.
- "This test was developed and its performance characteristics determined by MedGenome"

APPENDIX-I

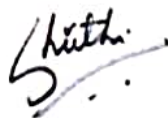
G-group	NMDP Allele Code	Included Alleles
Satvik		
A*24:02:01G	A*24:EKZMC	24:02:01:01/24:02:01:02L/24:02:01:03/24:02:01:04/24:02:01:05/24:02:01:06/24:02:01:07/24:02:01:08/24:02:01:09/24:02:01:10/24:02:01:11/24:02:01:12/24:02:01:13/24:02:01:14/24:02:01:15/24:02:01:16/24:02:03Q/24:02:10/24:02:101/24:02:102/24:02:103/24:02:108/24:02:13/24:02:31/24:02:40/24:02:43/24:02:44/24:02:56/24:02:65/24:02:79/24:02:80/24:02:81/24:02:82/24:02:83/24:02:84/24:02:98/24:09N/24:11N/24:40N/24:76/24:79/24:83N/24:144/24:150/24:153/24:154/24:155N/24:163N/24:183N/24:231/24:249/24:250/24:251/24:263/24:264/24:265/24:266/24:267/24:268/24:269/24:270/24:271/24:352/24:353/24:354/24:383/24:385/24:388N/24:400/24:401/24:402
A*24:02:01G	A*24:EKZMC	24:02:01:01/24:02:01:02L/24:02:01:03/24:02:01:04/24:02:01:05/24:02:01:06/24:02:01:07/24:02:01:08/24:02:01:09/24:02:01:10/24:02:01:11/24:02:01:12/24:02:01:13/24:02:01:14/24:02:01:15/24:02:01:16/24:02:03Q/24:02:10/24:02:101/24:02:102/24:02:103/24:02:108/24:02:13/24:02:31/24:02:40/24:02:43/24:02:44/24:02:56/24:02:65/24:02:79/24:02:80/24:02:81/24:02:82/24:02:83/24:02:84/24:02:98/24:09N/24:11N/24:40N/24:76/24:79/24:83N/24:144/24:150/24:153/24:154/24:155N/24:163N/24:183N/24:231/24:249/24:250/24:251/24:263/24:264/24:265/24:266/24:267/24:268/24:269/24:270/24:271/24:352/24:353/24:354/24:383/24:385/24:388N/24:400/24:401/24:402
B*40:01:01G	B*40:EKZMU	40:01:01/40:01:02:01/40:01:02:02/40:01:02:03/40:01:02:04/40:01:02:05/40:01:02:06/40:01:02:07/40:01:25/40:01:36/40:01:37/40:01:42/40:01:45/40:01:48/40:01:52/40:55/40:141/40:150/40:151/40:179/40:221/40:236/40:241/40:247/40:264/40:272/40:278/40:299/40:301/40:329/40:338N/40:353
C*03:04:01G	C*03:EKZNF	03:04:01:01/03:04:01:02/03:04:01:03/03:04:01:04/03:04:01:05/03:04:01:06/03:04:01:07/03:04:01:08/03:04:03/03:04:20/03:04:36/03:04:43/03:04:44/03:04:55/03:04:58/03:100/03:101/03:105/03:106/03:211/01/03:211/02/03:212/03:213/03:218/03:219/03:236/03:252/03:294/03:303/03:354/03:358/03:359/03:366N/03:369/03:376/03:381/03:387
C*07:01:01G	C*07:EKZNK	07:01:01:01/07:01:01:02/07:01:01:03/07:01:01:04/07:01:01:05/07:01:01:06/07:01:01:07/07:01:01:08/07:01:09/07:01:10/07:01:11/07:01:12/07:01:13/07:01:14Q/07:01:15/07:01:16/07:01:17/07:01:18/07:01:19/07:01:20/07:01:21/07:01:22/07:01:23/07:01:24/07:01:02/07:01:09/07:01:19/07:01:39/07:01:61/07:06:01/07:06:01:02/07:18/07:52/07:153/07:166/07:337/07:343/07:419/07:458/07:588/07:591/07:607/07:610/07:615/07:617/07:618/07:619/07:621/07:623/07:624
DRB1*07:01:01G	DRB1*07:EKZPZ	07:01:01:01/07:01:01:02/07:01:01:03/07:01:18/07:01:21/07:34/07:72/07:79/07:81/07:85
DRB1*11:01:01G	DRB1*11:EJTK	11:01:01:01/11:01:01:02/11:01:01:03/11:01:01:04/11:01:08/11:01:29/11:01:30/11:97
DQB1*02:01:01G	DQB1*02:EJJSN	02:01:01/02:01:08/02:01:26/02:01:27/02:02:01:01/02:02:01:02/02:02:01:03/02:02:01:04/02:02:02:02:03/02:02:05/02:04/02:06/02:09/02:10/02:48/02:59/02:64/02:79/02:80/02:81/02:82/02:89/02:96N/02:97/02:98/02:99/02:102/02:105/02:106
DQB1*03:01:01G	DQB1*03:EJJSR	03:01:01:01/03:01:01:02/03:01:01:03/03:01:01:04/03:01:01:05/03:01:01:06/03:01:01:07/03:01:01:08/03:01:09/03:01:10/03:01:11/03:01:12/03:01:13/03:01:14/03:01:15/03:01:16/03:01:17/03:01:18/03:01:19/03:01:20/03:01:04/03:01:05/03:01:09/03:01:10/03:01:11/03:01:12/03:01:20/03:01:26/03:01:31/03:01:35/03:01:36/03:01:39/03:01:40/03:01:41/03:09/03:19/01/03:21/03:22/03:24/03:29/03:35/03:42/03:49/03:50/03:51/03:84N/03:94/03:115/03:116/03:164/03:165/03:169/03:182/03:191/03:196/03:198/03:206/03:241/03:243/03:246/03:253/03:264/03:266/03:276N/03:281

References:

1. Carey, B. Sean, Kay Victoria Poulton, and Anthony Poles. "Factors affecting HLA expression: A review." *International journal of immunogenetics* 46.5 (2019): 307-320.
2. Grubic, Zorana, et al. "STR and HLA analysis in paternity testing." *International Congress Series*. Vol. 1261. Elsevier, 2004.
3. Edgerly, Claire H., and Eric T. Weimer. "The past, present, and future of HLA typing in transplantation." *HLA Typing* (2018): 1-10.
4. Kishore, Amit, and Martin Petrek. "Next-generation sequencing based HLA typing: deciphering immunogenetic aspects of sarcoidosis." *Frontiers in genetics* 9 (2018): 503.
5. Hurley, Carolyn Katovich. "Naming HLA diversity: a review of HLA nomenclature." *Human immunology* 82.7 (2021): 457-465.
6. Baxter-Lowe, Lee Ann. "The changing landscape of HLA typing: understanding how and when HLA typing data can be used with confidence from bench to bedside." *Human Immunology* 82.7 (2021): 466-477.
7. <https://www.ebi.ac.uk/ipd/imgt/hla/alignment/>
8. <https://hla.alleles.org/nomenclature/index.html>
9. https://www.gendx.com/product_category/ngs-hla-typing/



Deepika Arora
Lead Genome Analyst



Dr. Shruthi.P.S
MBBS, MD (Pathology)
Senior Hematopathologist
KMC Reg No. 78159

----- End of Report -----

HLA TYPING REPORT

HLA TYPING REPORT	
Sample information	
Name	Satvik
Order ID/Sample ID	764973/8178923
Gender	Male
Age / Relationship	1 Year & 4 Months
Sample type	BUCCAL SWAB
Collection date & time	10-10-2023 17:19:00
Receipt date & time	11-10-2023 11:07:00
Report date & time	17-10-2023 15:47:21
Clinical indication	Juvenile myelomonocytic leukemia (JMML) with monosomy 7
Test Requested	MGM517 - HLA Typing High resolution (HLA A, B, C, DRB1, DQB1)
Requested by	Dr. Sangeeta Mudaliar, BJ Wadia, Haematology (Mumbai)

TYPING RESULT					
LOCUS	HLA-A*	HLA-B*	HLA-C*	HLA-DRB1*	HLA-DQB1*
Satvik					
HLA-CLASS I & II	A*24:02:01G	B*40:01:01G	C*03:04:01G	DRB1*07:01:01G	DQB1*02:01:01G
	A*24:02:13	B*44:03:02G	C*07:06:01:01	DRB1*11:01:01G	DQB1*03:01:01G

Comment

G code: G code is a group of alleles that have identical nucleotide sequences in the antigen recognition site. Allele Database Version used in the report is 3.52 & Software version is 2.30.1.29498 Refer Appendix-I for G-Groups and NMDP (National Marrow Donor Program) codes.

Interpretation
NA

Master **SATVIK BHAVESH KESHARI (CMLD 82354)**
Age: 1 Yrs 2 Mon Sex: Male B J WADIA Hospital
Lab No : **10235174**
Permanent ID :

Registered On 11/09/2023 18:23:04
Collected On 11/09/2023 21:33:01
Authenticated On 14/09/2023 13:57:47
FLW/23-2961



Flow Cytometry for leukemias (Panel1)

Clinical history ? Acute leukemia
Instrument software BD FACS LYRIC/BD FACS SUITE
Cell preparation method Stain - Lyse - Wash
Gating strategy 10 colour FCM using CD 45 gating.

Descriptive Summary:- Flow cytometric immunophenotypic analyses of the sample was done.

The analysis shows a predominant population of myeloid cells along with lymphocytes and normal haematogones, erythroid precursors, prominent population of monocytes (~10%).

In addition ~4% myeloid blasts are seen. Myeloid blasts show normal expression patterns of CD33, CD13, CD117, HLA DR, CD34 and CD38. the CD34 bright CD38 dim population of these myeloid blasts express variable CD25 and CD11b. heterogeneous CD7 expression is also noted in blasts while other B cell and T cell markers are negative

In addition prominent population of myeloid and monocytic series cells showing normal pattern of maturation and differentiation.

IMPRESSION: Flow cytometry analysis shows ~4% normal myeloid blasts along with background prominent myelomonocytic maturation and differentiation.

Morphologically slides show leukocytosis, increased blasts with monocytosis and myeloid prominence. This along with the above flow cytometry findings favour an underlying Juvenile Myelo Monocytic Leukemia

Correlate with bone marrow aspirate and bone marrow biopsy along with detailed cytogenetic and molecular findings

Signature
Page No: 1 of 2

Dr. VASUDHA KAUL, M.D. Pathology
Consultant, Sehgal Path Lab

Signature

Dr. KUNAL SEHGAL, M.D.
Director, Sehgal Path Lab

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MANISH NAGAR:
118/119, 1st floor, Inspire Hub,
Western Heights, JP Road,
Andheri West, Mumbai - 53

FOUR BUNGALOWS:
003, Ground Floor, Yashodhan
Building 2, JP Road, 4 Bungalows,
Andheri West, Mumbai - 53

YARI ROAD:
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Beach, Yari Road, Versova,
Mumbai - 61

JUHU:
Crest Clinic, 802, Casablanca,
Cross Road No. 10, Gulmohar Road,
Juhu, Mumbai - 49

To: Dept Of Hemato Oncology-Wadia Children
Hospital
Acharya Donde Marg,
Parel,
Mumbai- 400012
Maharashtra
Report Of: Mast. SATVIK BHAVESH KESHARI



Sample ID : 2300176507
Patient ID : 1002380837
Collected on : 11-09-2023
Received on : 12-09-2023 13:35:00
Reported on : 15-09-2023 19:22:32
Ref By : Dept Of Hemato Oncology-
Wadia Children Hospital

MOLECULAR CYTOGENETICS (FISH) REPORT

Patient Name : Mast. SATVIK BHAVESH KESHARI
Age : 1 Year 2 Months
Gender : Male
Physician Name : DR. SANGEETA MUDALIAR
Specimen : Ok
Provisional : Acute leukemia(AL)
Status :
Diagnosis : Disease Status: N.A
Specimen Type : Bone Marrow Aspirate (BMA)
Haematopathology : JMML
Report :
Test Requested : t(9;22) (BCR-ABL1) FISH, -7/del(7q) FISH

Test : -7/del(7q) FISH Analysis.
Method : Direct and 24 hr culture of Bone marrow aspirate followed by interphase cells preparation, Fluorescence in situ hybridization on interphase cells.
Probe : Metasystem XL 7q22 / 7q36 TC probe.
Limit of Detection: Locus specific deletion probe 5%, 5% (monosomy)
No. of Cells Analysed : 200

Result:

-7/del(7q) FISH Analysis:

-7/del(7q)	7q22(CUX1) (Orange)	7q36(EZH2) (Green)	CEN7 (D7Z1) (Aqua)	No. Cells
Signal/s/Cells	1	1	1	36/200

Mast. SATVIK BHAVESH KESHARI

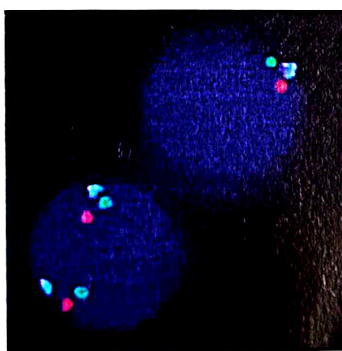
Sample ID: 2300176507

Interpretation: Fluorescence in situ hybridization (FISH) with above mentioned probe showed evidence of monosomy of chromosome 7 (Freq. 18%).

IMPRESSION: Present case revealed monosomy of chromosome 7. Monosomy of chromosome 7 is recurrent abnormality in JMML as per lit reports Monosomy 7 is common 20-30% cases of JMML. Monosomy 7 is most commonly associated with KRAS as a secondary mutation.

References:

1. P. S. Kadam Amare, H. Jain, S. Kabre, Y. Deshpande, P. Pawar, S. Banavali, H. Menon, M. Sengar, B. Arora, N. Khattri, G. Narula, D. Sarang, S. Kaskar, B. Bagal, H. Jain, Uma Dangi, P. G. Subramanian, S. Gujral. Cytogenetic Profile in 7209 Indian Patients with de novo Acute Leukemia: A Single Centre Study from India. *Journal of Cancer Therapy* 7: 530-544, 2016. DOI: 10.4236/jct.2016.77056
2. Daniel A. Arber, Attilio Orazi, Robert Hasserjian, Jurgen Thiele, et al. The 2016 revision to the World Health Organization classification of myeloid neoplasms and acute leukemia. *Blood* 127:2391-2405, 2016; doi: <https://doi.org/10.1182/blood-2016-03-643544>
3. Atlas of Genetics and cytogenetics in Oncology and Hematology. <http://AtlasgeneticsOncology.org/Anomalies>, accessed 28 January, 2014.
4. Christina Mayerhofer, Charlotte M. Niemeyer, and Christian Flotho. Current Treatment of Juvenile Myelomonocytic Leukemia. *J Clin Med*. 2021 Jul; 10(14): 3084. Published online 2021 Jul 13. doi: 10.3390/jcm10143084 PMCID: PMC8305558 PMID: 34300250

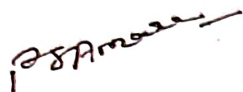


FISH on interphase cells showing monosomy of chromosome 7

Prepared By : **Mahima Patil**
Verified By : **Pranita Pawar**

Mast. SATVIK BHAVESH KESHARI

Sample ID: 2300176507



Dr. P. S. Kadam Amare
Oncogeneticist
Chief & Lab Director "Cancer &
Clinical Genetics"
Lilac Insights Pvt. Ltd.



Dr. Hrushikesh Lele
Sr. Scientific Officer
Oncocytogenetics Dept.
Lilac Insights Pvt. Ltd.

- End of Report -

Conditions of Reporting/Disclaimer:

- The report relates only to the specimen submitted to the lab which was verified and confirmed at the time of specimen collection. Also it is presumed that the specimen belongs to the patient named or identified, such verification being carried out at the point of generation of the said specimen.
- Although Conventional karyotyping is a gold standard method of cytogenetics which gives a global whole genomic view of multiple known, unknown chromosomal abnormalities, small cryptic, subtle aberrations below 7-8 Mb resolution can be missed.
- In spite of known sensitivity and efficiency of the genetic test, the test results have to be correlated with other clinical and pathological finding for conclusive diagnosis and disease management.
- A test request may be revised or generated by Lilac geneticist with an intimation to an Oncologist if: 1) Incomplete requisition 2) After haematopathology Update.
- In 1-2 % of APL cases, FISH may turn out to be negative due to PML/RARA probe design which unable to detect cryptic insertion of PML to RARA. In such rare cases, It is advisable to check PML-RARA by molecular methods.
- In case of Multiple Myeloma, flowcytometry report indicating abnormal plasma cell population is important for reference, as small abnormal clones may get deduced as per limit of detection policy in FISH analysis.
- In case of FFPE FISH, if H & E stained slides &/or histopathology report is not provided by customer, LILAC proceed with H & E staining followed by histopathology remarks along with marking of tumor area by our consultant pathologist.
- Assays are performed in accordance with standard procedure on receipt. The reported results are dependent on individual assay methods, equipment used, method specificity, sensitivity and quality of specimen(s) received.
- Lilac Insights Pvt. Ltd. has policy to return the FFPE blocks within one month after final reporting with proper documentation of the dispatch of the block to customer from accession dept, Lilac. After dispatch, if there is no intimation from customer within two weeks, Lilac will not be responsible for the Dispatched FFPE block.
- Soft copies of oncocytogenetics reports are sent to customer by office mail ID. Also, Hardcopies are sent to customer only on the address provided by client.



Date: 12/10/2023

TO WHOM-SO-EVER ITMAY CONCERN

I wish to stat that Satvik Keshari, 1.5 year / male, MRN 12520000163817, has been diagnosed with Juvenile Myelomonocytic leukemia. He is planned for Bone Marrow Transplant due to very high risk of leukemia. He does not have a fully matched sibling donor and hence planned for haplo-identical donor bone marrow transplant or matched unrelated donor.

The approximate cost of BMT would be 30 lakhs rupees with an expected stay in the hospital for at least 42 days. This is an estimate only and is likely to change based on the actual expenditure.

BMT chemotherapy	Rs. 4,00,000/-
Supportive care (Antibiotics, other medicines, par-enteral mutation, professional charges)	Rs. 6,00,000/-
Blood bank and harvest charges	Rs. 2,00,000/-
Hospitalization (during BMT up to 42 days)	Rs. 5,00,000/-
Investigations	Rs. 3,00,000/-
Unrelated Donor Stem Cell cost or T cell depletion cost for haplo BMT	Rs. 10,00,000/-
Total cost estimate	Rs. 30,00,000/-

Dr. Chintan Vyas

Consultant Pediatric Hemato-Oncologist & Bone Marrow Transplant Physician
SRCC Children hospital, NH Group
Mumbai 400 034

Dr. Chintan Vyas
MMC: 2021107953



CONSULTATION SUMMARY

Patient MRN : 12520000163817
Patient Name : Master Satvik Keshari
Gender/Age/Dob : Male , 1 Year 4 Months , 10/06 /22
Patient Phone No : 9167945052
Patient Address : 18,RAJDALARI BHAVAN WING
B ,SHIVAJI NAGAR,Thane,
Thane,Maharashtra,India,
-400604

Consultation Date : 12/10/2023 02:29 PM
Consultant : Dr. Chintan T Vyas
(PAEDIATRIC ONCOLOGY,
HAEMATO-ONCOLOGY & BMT)
Consultation Type : OP , NEW VISIT



DIAGNOSIS

- 445227008 | Juvenile myelomonocytic leukemia, Primary, Final, 12/10/2023
Remarks: Monosomy 7, PTPN mutation.

CHIEF COMPLAINTS & HISTORY OF PRESENT ILLNESS

- nil :

VITALS

Blood Pressure : 100/70 mmHg

Heart Rate: 110 bpm

Respiratory Rate: 22 /min

Temperature : 98 F

Conscious level: Alert

MEWS Score: 3

Weight : 8.3 kg

PROCEDURE HISTORY

- No known surgical history

PAST MEDICAL HISTORY

- No significant past medical history

ALLERGY

- No known allergies

PLAN

- Advised for HLA reporting to search for MUD

Also to look for haplo possibility, (T cell deplete)

Parents explained about complications, cost, and success post BMT.

SOCIAL HISTORY

- No significant social history



Patient Name : Master Satvik Keshari

Patient MRN : 12520000163817

Gender|Age|DoB : male|2y 4m|10/06/22

Address : 18, RAJDALARI BHAVAN WING B ,SHIVAJI NAGAR, Thane, Thane, Maharashtra, India, 400604

Bill No : IB125224J000370

Billing Date : 14-10-2024 02:06 PM

Tariff Class : General

Admitted Under : Dr. Chintan T Vyas

Visit No : DC-011

Admission Date : 14-10-2024 09:24 AM

Discharge Date : 14-10-2024 01:38 PM

Ward/Bed : GENERAL WARD - 3 / 2F GW 20

Particulars	SAC	Order date	Qty	MRP	Unit Rate	Amount (Rs)
Administrative						
1. ADMISSION	-	14-10-2024	1		400.00	400.00
2. BIOMEDICAL WASTE MANAGEMENT SERVICE	-	14-10-2024	1		370.00	370.00
Total						770.00
Bed Charges						
1. BED CHARGES - DAY CARE	(999311)	14-10-2024	1		1,270.00	1,270.00
Total						1,270.00
Blood Components						
1. PLATELET CONCENTRATE ((NAT+ CHEMI+ANTIBODY SCREEN)	-	14-10-2024	1		800.00	800.00
2. PLATELET CONCENTRATE ((NAT+ CHEMI+ANTIBODY SCREEN)	-	14-10-2024	1		800.00	800.00
3. IRRADIATION - COMPONENT	-	14-10-2024	2		1,000.00	2,000.00
Total						3,600.00
Hospitalisation and Care						
1. MEDICAL CARE CHARGES (Nursing Charges)	-	14-10-2024	1		1,200.00	1,200.00
Total						1,200.00
Laboratory Services						
1. COMPLETE BLOOD COUNT (CBC)	-	14-10-2024	1		480.00	480.00
Total						480.00
Procedures						
1. DRESSINGS MEDIUM	-	14-10-2024	1		370.00	370.00
Total						370.00
MEDICINES						
1. PHENIRAMINE MALEATE-INJECTION-2ML-AVIL- 2124069 / 2027-03-31 (30049039)		14-10-2024	1	6.16	6.16	6.16
2. HAEMOCOAGULASE+GLUCONATE-SOLUTION-10ML-BOTROCLOT T- BTS03030 / 2026-02-28 (30049084)		14-10-2024	1	180.00	180.00	180.00
Total						186.16
SURGICAL CONSUMABLES						
1. IV SET-VENTED LUER LOCK--MICROPERF SS 3064 ROMSONS- K24G020696 / 2029-06-30 (90183990)		14-10-2024	1	225.00	225.00	225.00
Total						225.00

Discount - Patient: 135.00, Sponsor:0.00

GSTIN: 27AABCN1685J128

Total Hospital Charges for Rendered Services/Items : 8,101.16

Less Discount : 135.00

Total Bill Amount Including Taxes before round off : 7,966.16

Sponsor Payable : 0.00

Patient Round Off : -0.16

Patient Payable : 7,966.00

Amount in words: Rupees Seven Thousand Nine Hundred Sixty Six Only

Total savings: **Rs. 135.00**

Receipt No.	Date	Receipt Amount	Adjusted Amount
1. RCPO-1252-2410001269	10-10-2024 02:57 AM	10,000.00	4,262.00
2. RCPO-1252-2410001412	10-10-2024 08:34 PM	100,000.00	3,704.00
		Total	7,966.00

Balance Details

Gross bill amount :	8,101.16
Less Discount :	135.00
Sponsor Amount :	0.00
Net Amount :	7,966.00
Amount Paid :	7,966.00
Balance To Pay :	0.00

NOTE:

As per the existing notifications, circulars and clarifications provided by the Authorities , Healthcare Services are exempt from Goods and Services Tax except for GST on Bed Charges above 5K per day (except ICU).

Prepared By: Samiran Satish Juvekar, 370093 | **Prepared On:** 14-10-2024 14:06 |
Published By: Administrator, admin | **Published On:** 14-10-2024 14:08 |

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FINAL BILL

NH Children's Hospital, Mumbai- OFFICE - GENERAL

ADMISSION - 1

NH-SRCC, C.S No. 5/47, Plot No.10, Haji Ali Park, Keshav Rao Khadya Marg,
Mumbai, Maharashtra, India -400034



Patient Name : Master Satvik Keshari
Patient MRN : 12520000163817
Gender|Age|DoB : male|2y 3m|10/06/22
Address : 18, RAJDALARI BHAVAN WING B ,SHIVAJI NAGAR,
Thane, Thane, Maharashtra, India, 400604

Bill No : IB125224J000198
Billing Date : 08-10-2024 12:59 PM
Tariff Class : General
Admitted Under : Dr. Chintan T Vyas
Visit No : IP-007
Admission Date : 02-10-2024 09:05 AM
Discharge Date : 08-10-2024 11:37 AM
Ward/Bed : GENERAL WARD - 5 / 2F GW 42

Plan: 1252_NARAYANA HRUDAYALAYA CHARITABLE TRUST_FUND |

Sponsor : NARAYANA HRUDAYALAYA CHARITABLE TRUST (NARAYANA HRUDAYALAYA CHARITABLE TRUST, 1737_C) |

Sponsor Bill No : SB125224J000091 | **Sponsor Payable :** 69,657.59

Particulars	SAC	Order date	Qty	MRP	Unit Rate	Amount (Rs)
<u>Administrative</u>						
1. ADMISSION	-	02-10-2024	1		400.00	400.00
2. BIOMEDICAL WASTE MANAGEMENT SERVICE	-	02-10-2024	1		370.00	370.00
3. DIET CHARGES	-	02-10-2024	1		300.00	300.00
4. DIET CHARGES	-	03-10-2024	1		300.00	300.00
5. BIOMEDICAL WASTE MANAGEMENT SERVICE	-	03-10-2024	1		370.00	370.00
6. DIET CHARGES	-	04-10-2024	1		300.00	300.00
7. BIOMEDICAL WASTE MANAGEMENT SERVICE	-	04-10-2024	1		370.00	370.00
8. DIET CHARGES	-	05-10-2024	1		300.00	300.00
9. BIOMEDICAL WASTE MANAGEMENT SERVICE	-	05-10-2024	1		370.00	370.00
10. DIET CHARGES	-	06-10-2024	1		300.00	300.00
11. BIOMEDICAL WASTE MANAGEMENT SERVICE	-	06-10-2024	1		370.00	370.00
12. DIET CHARGES	-	07-10-2024	1		300.00	300.00
13. BIOMEDICAL WASTE MANAGEMENT SERVICE	-	07-10-2024	1		370.00	370.00
Total						4,420.00
<u>Bed Charges</u>						
1. BED CHARGES - WARD	(999311)	02-10-2024	1		2,000.00	2,000.00
2. BED CHARGES - WARD	(999311)	03-10-2024	1		2,000.00	2,000.00
3. BED CHARGES - WARD	(999311)	04-10-2024	1		2,000.00	2,000.00
4. BED CHARGES - WARD	(999311)	05-10-2024	1		2,000.00	2,000.00
5. BED CHARGES - WARD	(999311)	06-10-2024	1		2,000.00	2,000.00
6. BED CHARGES - WARD	(999311)	07-10-2024	1		2,000.00	2,000.00
Total						12,000.00
<u>Blood Components</u>						
1. IRRADIATION - COMPONENT	-	02-10-2024	2		1,000.00	2,000.00
2. PLATELET CONCENTRATE ((NAT+ CHEMI+ANTIBODY SCREEN)	-	02-10-2024	1		800.00	800.00
3. PLATELET CONCENTRATE ((NAT+ CHEMI+ANTIBODY SCREEN)	-	02-10-2024	1		800.00	800.00
4. STERILEDEVICE - COMPONENT	-	02-10-2024	1		580.00	580.00
5. BLOOD CROSS MATCHING	-	02-10-2024	1		120.00	120.00
6. IRRADIATED PACKED RED BLOOD CELLS	-	02-10-2024	1		3,367.00	3,367.00
Total						7,667.00
<u>Consultation</u>						
1. CONSULTATION - IP Dr. Chintan T Vyas	-	02-10-2024	1		1,200.00	1,200.00

Particulars	SAC	Order date	Qty	MRP	Unit Rate	Amount (Rs)
2. CONSULTATION - IP Dr. Chintan T Vyas	-	03-10-2024	1		1,200.00	1,200.00
3. CONSULTATION - IP Dr. Chintan T Vyas	-	04-10-2024	1		1,200.00	1,200.00
4. CONSULTATION - IP Dr. Chintan T Vyas	-	05-10-2024	1		1,200.00	1,200.00
5. CONSULTATION - IP Dr. Chintan T Vyas	-	06-10-2024	1		1,200.00	1,200.00
Total						6,000.00
Hospitalisation and Care						
1. MEDICAL CARE CHARGES (Nursing Charges)	-	02-10-2024	1		1,200.00	1,200.00
2. MEDICAL CARE CHARGES (Nursing Charges)	-	03-10-2024	1		1,200.00	1,200.00
3. MEDICAL CARE CHARGES (Nursing Charges)	-	04-10-2024	1		1,200.00	1,200.00
4. MEDICAL CARE CHARGES (Nursing Charges)	-	05-10-2024	1		1,200.00	1,200.00
5. MEDICAL CARE CHARGES (Nursing Charges)	-	06-10-2024	1		1,200.00	1,200.00
6. MEDICAL CARE CHARGES (Nursing Charges)	-	07-10-2024	1		1,200.00	1,200.00
Total						7,200.00
Laboratory Services						
1. PAIRED BLOOD CULTURE	-	02-10-2024	1		3,210.00	3,210.00
2. CRP (C -REACTIVE PROTEIN)	-	02-10-2024	1		1,450.00	1,450.00
3. COMPLETE BLOOD COUNT (CBC)	-	02-10-2024	1		610.00	610.00
4. CALCIUM	-	03-10-2024	1		360.00	360.00
5. PHOSPHORUS	-	03-10-2024	1		360.00	360.00
6. SERUM CREATININE	-	03-10-2024	1		420.00	420.00
7. URIC ACID	-	03-10-2024	1		360.00	360.00
8. POTASSIUM, SERUM	-	03-10-2024	1		360.00	360.00
9. COMPLETE BLOOD COUNT (CBC)	-	04-10-2024	1		480.00	480.00
10. COMPLETE BLOOD COUNT (CBC)	-	05-10-2024	1		480.00	480.00
11. COMPLETE BLOOD COUNT (CBC)	-	06-10-2024	1		480.00	480.00
12. COMPLETE BLOOD COUNT (CBC)	-	07-10-2024	1		480.00	480.00
13. CMV PCR FOR QUANTIFICATION	-	08-10-2024	1		3,630.00	3,630.00
14. POTASSIUM, SERUM	-	08-10-2024	1		360.00	360.00
15. COMPLETE BLOOD COUNT (CBC)	-	08-10-2024	1		480.00	480.00
Total						13,520.00
Radiology						
1. XRAY CHEST PA	-	02-10-2024	1		580.00	580.00
Total						580.00
MEDICINES						
1. SODIUM CHLORIDE(NS)-INFUSION-0.9% 100ML-EUROHEAD BOTTLE FRESINIUS- 82TG204102 / 2027-06-30 (30049099)		02-10-2024	2	47.09	47.09	94.18
2. MEROPENEM-INJECTION-500MG-PENMER (ERIS LIFE) 3324024 / 2026-03-31 (30041090)		02-10-2024	1	809.00	809.00	809.00
3. AMIKACIN-INJECTION-250MG-OMNIKACIN- CPN054001 / 2026-01-31 (30042099)		02-10-2024	1	55.55	55.55	55.55
4. PHENIRAMINE MALEATE-INJECTION-2ML-AVIL- 2124069 / 2027-03-31 (30049039)		02-10-2024	1	6.16	6.16	6.16
5. PARACETAMOL-INFUSION-100ML-MALIDENS- ABK0140 / 2026-05-31 (30049069)		02-10-2024	1	688.31	688.31	688.31
6. SODIUM CHLORIDE(NS)-INFUSION-0.9% 100ML-EUROHEAD BOTTLE FRESINIUS- 82TG204102 / 2027-06-30 (30049099)		02-10-2024	2	47.09	47.09	94.18
7. ALLOPURINOL-TABLET-100MG-ZYLORIC- EE2415 / 2027-03-31 (30049099)		02-10-2024	10	2.12	2.12	21.17
8. CYTARABINE-INJECTION-100MG/1ML-BIOBIN- BYA1041 / 2026-09-30 (30049049)		02-10-2024	1	67.00	67.00	67.00

Particulars	SAC	Order date	Qty	MRP	Unit Rate	Amount (Rs)
9. ACICLOVIR-SUSPENSION-400MG/5ML(100ML)-ZOVIRAX- NA146 / 2025-09-30 (30049099)		02-10-2024	1	151.20	151.20	151.20
10. MEROPENEM-INJECTION-500MG-PENMER (ERIS LIFE) 3324024 / 2026-03-31 (30041090)		03-10-2024	1	809.00	809.00	809.00
11. AMIKACIN-INJECTION-250MG-OMNIKACIN- CPN054002 / 2026-02-28 (30042099)		03-10-2024	1	55.55	55.55	55.55
12. CYTARABINE-INJECTION-100MG/1ML-BIOBIN- BYA1041 / 2026-09-30 (30049049)		03-10-2024	1	67.00	67.00	67.00
13. DEXTROSE+SODIUM CHLORIDE(DNS)-INFUSION-5%+0.9%(500ML)-EUROHEAD BOTTLE FRESENIUS- 82TH111603 / 2027-07-31 (30049099)		03-10-2024	1	95.77	95.77	95.77
14. SODIUM CHLORIDE(NS)-INFUSION-0.9% 100ML-EUROHEAD BOTTLE FRESENIUS- 82TG204102 / 2027-06-30 (30049099)		03-10-2024	5	47.09	47.09	235.45
15. PANTOPRAZOLE-INJECTION-40MG-ZOVANTA- PPQDA115 / 2026-04-30 (30049099)		03-10-2024	1	56.50	56.50	56.50
16. MEROPENEM-INJECTION-500MG-PENMER (ERIS LIFE) 3324024 / 2026-03-31 (30041090)		03-10-2024	2	809.00	809.00	1,618.00
17. AMIKACIN-INJECTION-250MG-OMNIKACIN- CPN054002 / 2026-02-28 (30042099)		03-10-2024	1	55.55	55.55	55.55
18. PANTOPRAZOLE-INJECTION-40MG-ZOVANTA- PPQDA115 / 2026-04-30 (30049099)		03-10-2024	1	56.50	56.50	56.50
19. ONDANSETRON-INJECTION-4MG/2ML-ZYTRON- H 365 / 2026-02-28 (30049035)		03-10-2024	4	13.32	13.32	53.28
20. MEROPENEM-INJECTION-500MG-PENMER (ERIS LIFE) 3324024 / 2026-03-31 (30041090)		03-10-2024	3	809.00	809.00	2,427.00
21. SODIUM CHLORIDE(NS)-INFUSION (GLASS BOTTLE)-0.9% 500ML-DENIS- 2403002065 / 2026-05-31 (30049099)		04-10-2024	3	45.80	45.80	137.40
22. ETOPOSIDE-INJECTION-100MG/5ML-POSID- BESI2420ZA / 2026-05-31 (30049099)		04-10-2024	3	193.26	193.26	579.78
23. CYTARABINE-INJECTION-100MG/1ML-BIOBIN- BYA1041 / 2026-09-30 (30049049)		04-10-2024	3	67.00	67.00	201.00
24. SODIUM CHLORIDE(NS)-INFUSION-0.9% 100ML-EUROHEAD BOTTLE FRESENIUS- 82TG204102 / 2027-06-30 (30049099)		04-10-2024	3	47.09	47.09	141.27
25. ONDANSETRON-INJECTION-4MG/2ML-ZYTRON- H 365 / 2026-02-28 (30049035)		05-10-2024	3	13.32	13.32	39.96
26. PANTOPRAZOLE-INJECTION-40MG-ZOVANTA- PPQDA115 / 2026-04-30 (30049099)		05-10-2024	1	56.50	56.50	56.50
27. SODIUM CHLORIDE(NS)-INFUSION-0.9% 100ML-EUROHEAD BOTTLE FRESENIUS- 82TG204102 / 2027-06-30 (30049099)		05-10-2024	2	47.09	47.09	94.18
28. TRANEXAMIC ACID-INJECTION-500MG/5ML-GLANTRAX- GX2303 / 2025-09-30 (30049099)		05-10-2024	1	70.50	70.50	70.50
29. POTASSIUM CHLORIDE-INJECTION-10ML-POTASSIUM CHLORIDE BHAVANI PHARMA 062405 / 2027-05-31 (30045090)		05-10-2024	1	26.77	26.77	26.77
30. PANTOPRAZOLE-INJECTION-40MG-ZOVANTA- PPQDA115 / 2026-04-30 (30049099)		06-10-2024	1	56.50	56.50	56.50
31. DEXTROSE+SODIUM CHLORIDE(DNS)-INFUSION-5%+0.9%(500ML)-EUROHEAD BOTTLE FRESENIUS- 82TH111603 / 2027-07-31 (30049099)		06-10-2024	2	95.77	95.77	191.54
32. SODIUM CHLORIDE(NS)-INFUSION-0.9% 100ML-EUROHEAD BOTTLE FRESENIUS- 82TG204102 / 2027-06-30 (30049099)		06-10-2024	5	47.09	47.09	235.45
33. ONDANSETRON-INJECTION-4MG/2ML-ZYTRON- H 365 / 2026-02-28 (30049035)		06-10-2024	3	13.32	13.32	39.96
34. SODIUM CHLORIDE(NS)-INFUSION-0.9% 100ML-EUROHEAD BOTTLE FRESENIUS- 82TG204102 / 2027-06-30 (30049099)		06-10-2024	2	47.09	47.09	94.18
35. PANTOPRAZOLE-INJECTION-40MG-ZOVANTA- PPQDA115 / 2026-04-30 (30049099)		06-10-2024	1	56.50	56.50	56.50

Particulars	SAC	Order date	Qty	MRP	Unit Rate	Amount (Rs)
36. PARACETAMOL-INFUSION-100ML-MALIDENS- ABK0140 / 2026-05-31 (30049069)		07-10-2024	1	688.31	688.31	688.31
37. ALLOPURINOL-TABLET-100MG-ZYLORIC- EE2415 / 2027-03-31 (30049099)		07-10-2024	10	2.12	2.12	21.17
38. ONDANSETRON-INJECTION-4MG/2ML-ZYTRON- H 365 / 2026-02-28 (30049035)		07-10-2024	2	13.32	13.32	26.64
39. PANTOPRAZOLE-INJECTION-40MG-ZOVANTA- PPQDA123 / 2026-05-31 (30049099)		07-10-2024	1	56.50	56.50	56.50
Total						10,330.46
<u>SURGICAL CONSUMABLES</u>						
1. IV SET--W/AIR STOP&FILTER AUTOINFUSION POLYMED- 6358723M / 2028-10-31 (90183990)		02-10-2024	1	358.00	358.00	358.00
2. NEEDLE--18G X 1.5-SAFEWAY LIFELONG- 012418-G / 2028-12-31 (90183990)		02-10-2024	1	6.00	6.00	6.00
3. DRESSING SWAB GAUZE-STERILE (4S)-7.5CM X 7.5CM-- 070824 / 2027-08-31 (30059090)		02-10-2024	6	45.00	45.00	270.00
4. SYRINGE-PLAIN WITH NEEDLE-10ML-SAFEWAY LIFELONG- 072410-K / 2029-06-30 (90183100)		02-10-2024	4	33.00	33.00	132.00
5. GLOVES-STERILE-SIZE 6.5-CARETEX KURIAN- 4H410 / 2029-07-31 (40151100)		02-10-2024	1	90.00	90.00	90.00
6. HAND CARE GLOVES-STERILE--MEDIUM JAINEM INVAMED- G24F110554 / 2029-05-31 (40151900)		02-10-2024	4	16.72	16.72	66.88
7. DRESSING SWAB GAUZE-STERILE (4S)-7.5CM X 7.5CM-- 070824 / 2027-08-31 (30059090)		02-10-2024	5	45.00	45.00	225.00
8. SYRINGE-PLAIN WITH NEEDLE-10ML-SAFEWAY LIFELONG- 072410-K / 2029-06-30 (90183100)		02-10-2024	5	33.00	33.00	165.00
9. BLOOD TRANSFUSION SET(BT SET)-NON VENTED LUER LOCK --WITHOUT RUBBER- G24F020798 / 2029-05-31 (90183990)		02-10-2024	1	205.00	205.00	205.00
10. NEEDLE--16G X 1.5-- 28444C / 2029-06-30 (90183220)		02-10-2024	2	5.20	5.20	10.40
11. DIAPERS-BABY-MEDIUM-- TEDDY DIAPER MEDIUM / 2030-11-30 (96190040)		02-10-2024	10	21.00	21.00	210.00
12. DRESSING SWAB GAUZE-STERILE (4S)-7.5CM X 7.5CM-- 070824 / 2027-08-31 (30059090)		03-10-2024	5	45.00	45.00	225.00
13. SYRINGE-PLAIN WITH NEEDLE-5ML-SAFEWAY LIFELONG- 062405-J / 2029-05-31 (90183100)		03-10-2024	5	16.75	16.75	83.75
14. SYRINGE-PLAIN WITH NEEDLE-5ML-SAFEWAY LIFELONG- 062405-J / 2029-05-31 (90183100)		03-10-2024	5	16.75	16.75	83.75
15. SYRINGE-PLAIN WITH NEEDLE-10ML-SAFEWAY LIFELONG- 072410-K / 2029-06-30 (90183100)		03-10-2024	5	33.00	33.00	165.00
16. BED UNDER PADS--90CM X 60CM-ROMSONS- G24H085503 / 2027-07-31 (48189000)		04-10-2024	3	45.00	45.00	135.00
17. DIAPERS-BABY-MEDIUM-- TEDDY DIAPER MEDIUM / 2030-11-30 (96190040)		04-10-2024	10	21.00	21.00	210.00
18. GLOVES-STERILE-SIZE 6.5-CARETEX KURIAN- 4H410 / 2029-07-31 (40151100)		05-10-2024	3	90.00	90.00	270.00
19. DIAPERS-BABY-MEDIUM-- TEDDY DIAPER MEDIUM / 2030-11-30 (96190040)		05-10-2024	5	21.00	21.00	105.00
20. SYRINGE-LL W/O NEEDLE-50ML-NIPRO- 24D0404J / 2029-03-31 (90183100)		05-10-2024	3	165.00	165.00	495.00
21. NEEDLE--16G X 1.5-- 28444C / 2029-06-30 (90183220)		05-10-2024	2	5.20	5.20	10.40
22. SYRINGE-PLAIN WITH NEEDLE 24 X 1G-1ML-SLIP LIFELONG- 082101-AE / 2026-07-31 (90183100)		05-10-2024	2	20.00	20.00	40.00
23. HAND CARE GLOVES-STERILE--MEDIUM JAINEM INVAMED- G24F110554 / 2029-05-31 (40151900)		06-10-2024	5	16.72	16.72	83.60

Particulars	SAC	Order date	Qty	MRP	Unit Rate	Amount (Rs)
24. SYRINGE-PLAIN WITH NEEDLE-5ML-SAFEWAY LIFELONG- 062405-J / 2029-05-31 (90183100)		06-10-2024	5	16.75	16.75	83.75
25. ALCOHOL SWAB-.-.- 24090721 / 2027-08-31 (30051020)		06-10-2024	5	3.00	3.00	15.00
26. DRESSING SWAB GAUZE-STERILE (4S)-7.5CM X 7.5CM-SGSP009 BAPUJI 040624 / 2027-06-03 (30059090)		06-10-2024	5	45.00	45.00	225.00
27. NEEDLE-.-16G X 1.5-.- 28444C / 2029-06-30 (90183220)		06-10-2024	5	5.20	5.20	26.00
28. SYRINGE-PLAIN WITH NEEDLE-10ML-SAFEWAY LIFELONG- 072410-K / 2029-06-30 (90183100)		06-10-2024	5	33.00	33.00	165.00
29. BED UNDER PADS-.-90CM X 60CM-ROMSONS- G24H085503 / 2027-07-31 (48189000)		06-10-2024	5	45.00	45.00	225.00
30. GLOVES-STERILE-SIZE 6.5-CARETEX KURIAN- 4H410 / 2029-07-31 (40151100)		06-10-2024	2	90.00	90.00	180.00
31. SYRINGE-LL W/O NEEDLE-50ML-NIPRO- 24D0404J / 2029-03-31 (90183100)		06-10-2024	2	165.00	165.00	330.00
32. SYRINGE-PLAIN WITH NEEDLE-10ML-SAFEWAY LIFELONG- 072410-K / 2029-06-30 (90183100)		06-10-2024	6	33.00	33.00	198.00
33. GLOVES-STERILE-SIZE 7.5-DEXMED- 3I205 / 2028-08-31 (40151100)		07-10-2024	1	90.00	90.00	90.00
34. HAND CARE GLOVES-STERILE-.-MEDIUM JAINEM INVAMED- G24F110554 / 2029-05-31 (40151900)		07-10-2024	5	16.72	16.72	83.60
35. SYRINGE-LL W/O NEEDLE-50ML-NIPRO- 24D0404J / 2029-03-31 (90183100)		07-10-2024	1	165.00	165.00	165.00
36. IV SET-VENTED LUER LOCK-.-MICROPERF SS 3064 ROMSONS- K24G020829 / 2029-06-30 (90183990)		07-10-2024	2	225.00	225.00	450.00
37. SYRINGE-PLAIN WITH NEEDLE-10ML-SAFEWAY LIFELONG- 072410-K / 2029-06-30 (90183100)		07-10-2024	3	33.00	33.00	99.00
38. BLOOD TRANSFUSION SET(BT SET)-NON VENTED LUER LOCK -.-WITHOUT RUBBER- G24F020798 / 2029-05-31 (90183990)		07-10-2024	1	205.00	205.00	205.00
39. IV SET-VENTED LUER LOCK-.-MICROPERF SS 3064 ROMSONS- K24G020829 / 2029-06-30 (90183990)		07-10-2024	1	225.00	225.00	225.00
40. CATHETER STABILIZATION DEVICE-.-.-STATLOCK PICC PLUS TRICOT PIC0220 BARD- JUJN8671 / 2026-12-28 (90189099)		07-10-2024	1	660.00	660.00	660.00
41. DRESSING SWAB GAUZE-STERILE (4S)-7.5CM X 7.5CM-SGSP009 BAPUJI 040624 / 2027-06-03 (30059090)		07-10-2024	7	45.00	45.00	315.00
42. IV SET-VENTED LUER LOCK-.-MICROPERF SS 3064 ROMSONS- K24G020696 / 2029-06-30 (90183990)		08-10-2024	1	225.00	225.00	225.00
43. SYRINGE-PLAIN WITH NEEDLE-10ML-SAFEWAY LIFELONG- 072410-K / 2029-06-30 (90183100)		08-10-2024	10	33.00	33.00	330.00
Total						7,940.13

Total Hospital Charges for Rendered Services/Items : 69,657.59

Total Bill Amount Including Taxes before round off : 69,657.59

Sponsor Payable : 69,657.59

Patient Round Off : 0.00

Patient Payable : 0.00

GSTIN: 27AABCN1685J1Z8

Amount in words: Rupees Zero Only

Balance Details

Gross bill amount : 69,657.59

Less Discount : 0.00

Sponsor Amount : 69,657.59

Net Amount : 0.00

Amount Paid : 0.00

Balance To Pay : **0.00**

Remarks: Rs. 69658/- FROM NHCT

NOTE:
As per the existing notifications, circulars and clarifications provided by the Authorities , Healthcare Services are exempt from Goods and Services Tax except for GST on Bed Charges above 5K per day (except ICU).

Prepared By: Shantanu Shivraj Patil, 369607 | Prepared On: 08-10-2024 12:59 |

Published By: Administrator, admin | Published On: 09-10-2024 13:56 |

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Patient MRN	: 12520000163817	Admission No	: INP-1252-2410000023
Patient Name	: Master Satvik Keshari	Admission Date	: 02/10/2024 09:05 AM
Gender/Age/DoB	: Male , 2 Year 3 Months , 10/06/22	Discharge Date	: 08/10/2024 12:59 PM
		Discharge Type	: Normal Discharge

Referred By : -

Admitting Consultant: Dr. Chintan T Vyas(PAEDIATRIC ONCOLOGY, HAEMATO-ONCOLOGY & BMT)

FINAL DIAGNOSIS

Relapse Juvenile myelomonocytic leukemia, PTPT11 + high methylation index, post 6 cycles of Azacytidine, BM MRD - 2.73%, with persistent massive splenomegaly

Pre BMT

Chemo - 4.3.2024 - 8.3.2024- Azacytidine (100mg/m²) x 5 days + Cytarabine (100mg/m²)- 24 hrs infusion x 4 days and Etoposide 100mg/m² x 4 days with Sirolimus (1mg/day) from 4.3.2024 (5th day of cytarabine ad etoposide were not given due to very high grade fevers); Cytarabine (15mg/m²) subcutaneous once day for 10 days from 13.3.2024- 22.3.2024

Post 2nd transplant day+88 (DOT 24.5.24)

Post 1st transplant day+ 123 (DOT 19.4.24)

Primary Graft failure post 1st as well as second transplant. 1st GF was likely immunological secondary to severe macrophage activation, second GF was mainly non engraftment ? immunological.

1st transplant : CD45 RA and T-alpha beta depleted haplo BMT with Mother as donor

Conditioning: ATG (4.5mg/kg), Fludarabine (160mg/m²), treosulphan (36g/m²), thiotepa (10mg/kg), melphalan (80mg/m²), and rituximab (375mg/m²). GVH prophylaxis - cyclosporine alone

DOR: 19.04.2024: CD34: 29millions/kg and CD45RO: 3.5millions/kg

Post 1st BMT complications:

1. Day +5: Neutropenic fevers, culture negative, treated with mero/colistin and teicoplanin(CRE+)
2. Day+15 : severe MAS/HLH, ferritin max to 98000, requiring ICU care for 2 days, recived dexametasone for 5 days along with tocilizumab 1 dose. MAS settled following graft failure.
3. Day+19: Klebsiella: Severe Septic shock, shifted to ICU, required 3 inotropic support and mechanical ventilation for 2 days: Received: Zavicefta aztreonam and Colistin for 3 weeks
4. Day +31- Blood cultures: VRE+ (enterococcus bacteremia): daptomycin and tigecycline for 2 weeks

FINAL DIAGNOSIS

5. day+15 72% donor, Day+24- 25% donor, day+ 28- 2.93% donor and day+33: documented GF with 1.2 % chimerism and in view of severe pancytopenia with no signs of autologous recovery hence planned for urgent second transplant, ciclosporin stopped
6. Low level CMV reactivation post 1st BMT (max copies 1000), treated with cidofovir weekly (5mg/kg)

2nd transplant (22.05.2024) with mother as donor (same donor chosen as father was still DSA+ (5400) Non myeloablative conditioning 9in view of pancytopenia and previous infections) : Campath 0.3 mg/kg (subcutaneous) / Fludarabine (40mg/m²) / Cyclophosphamide (60mg/kg) / TBI 2 gray: 22.05.2024 Unmanipulated Stem cell doses given on: 24.05.2024: CD34: 10millions/kg and CD3: 2.8*10⁸cell/kg GVH Prophylaxis - MMF and tacrolimus

Post 2nd Transplant complications:

1. day+4 and +15, +29, +38 - Klebsiella: treated with zevicte, tigecyclin and colistin till culture became sterile from day+ 38
2. Day+8, +10, +20 , : Blood cultures: VRE+ (enterococcus bacteremia): daptomycin added for 2 weeks, tigecycline continued till culture became negative
3. Day+10: CMV+ : 1008 copy numbers: started on cidofovir: at 5 mg/kg>> day+17: 670>>> CMV viremia: 08.07: 217>> 1207:694. 17.07:1700>> cidofovir>> 22.07:495 copy numbers.
4. Day+20: Blood cultures: Enterococcus faecium: febrile neutropenia: treated with meropenem colistin.
5. Day+26: bone marrow aspiration and biopsy: aplastic bone marrow.
6. Day+15 chimerism 1.5 percent donor and and Day+28 chimerism confirmed non engraftment (second primary graft failure)
7. Day+17 stopped MMF and tacrolimus by day+22.

Planned for 3rd BMT: unrelated donor search going on (best match is 9/10)

>> Father or paternal haplo-matched uncle planned for donor (as both are DSA+ hence desensitization done)
>> 3 cycles of therapeutic plasma exchange (06.07.24, 08.07.24 and 11.07.24) and 1 dose of rituximab (12.07) and IVIG (13.07)

Option of splenectomy given but refused by parents

In view of persistent DSA positive post desensitization, 3rd HSCT was deferred after explaining risk vs benefit and planned to continue best supportive care

Day+57- eltrombopeg 25 mg OD from 18.7.2024 with SOS GCSF

Post 2nd transplant day+88 (DOT 24.5.24)- STARTED ON 6 MP (1/2 TAB 5 DAYS A WEEK- 40MG/M²/D) and Azacytidine 75mg/m²/d from 20.8.2024 x 5 days

CMV viremia- initially received cidofovir then Valgan

Relapse with presenting counts of 64k with monocytes: 13%.

FINAL DIAGNOSIS

Started on chemotherapy

1st cycle - 22.8.2024 - Azacytidine 75mg/m²/d x 6 days

2nd cycle - 14.9.2024 - Azacytidine 75mg/m²/d x 7 days

3rd cycle- : LD cytarabine 75mg/m² x 2 days from 2.10.24 & 3.10.24 followed by Cytarabine (100mg/m² CIV x 3 days) + Etoposide (100mg/m²) for 3 days, started from 04.10.2024 with 6 MP 50mg/m² (3 days a week)

ADMISSION REASON

Admitted for disease management

CHIEF COMPLAINTS & HISTORY OF PRESENT ILLNESS

Flow cytometry for leukemia (Panal 1) on 11/09/2024

Flow cytometry analysis shows 4% normal myeloid blast along with background prominent myelomonocytic maturation and differentiation

Morphologically slides shows leukocytosis, increased blast with monocytosis and myeloid prominence. This along with the above flow cytometry findings favour and underlying juvenile myelomonocytic leukemia

HRCT THORAX on 21/03/2024:-

Non specific dependent subpleural lung parenchymal opacities in the bilateral lower lobes and upper lobes (no features of active infection) No significant adenopathy in the thorax

VITALS

Blood Pressure : 90/60 mmHg

Height : 78 cm

Weight : 9.7 kg

BMI : 15.94 kg/m²

BSA : 0.46 m²

Temperature : 98 F

Heart Rate : 104 bpm

Respiratory Rate : 24 /min

Conscious level : Alert

MEWS Score : 3

COURSE IN HOSPITAL

On admission, in view of fevers, after sending cultures and PCT, he was started on Meropenem and Amikacin. He has been persistently thrombocytopenic, requiring daily transfusion. Spleen size increased to 7cms below left costal margin. Parents were counselled about the diagnosis and discussed with further management options. He was started on hydration and allopurinol and tumor lysis was monitored. He was given interim chemotherapy with 6MP and Cytarabine for 2 days, followed by Cytarabine and Etoposide @100mg/m² for 3 days. As his fevers subsided with no signs suggestive of active infection and sterile cultures, antibiotics were stopped. He tolerated chemotherapy well hence being discharge in a hemodynamically stable state.

COURSE IN HOSPITAL

Investigations:-

CBC 02/10/2024:- Hb-6.5Lg/dL, WBC-64.8L Thousand / μ L, **platelet**-3.8LThousand / μ L, **N**-50, **L**-6, **M**-13

Medications received:

1. Inj. Meropenem 400mg IV TDS for 4 days
2. INj. Amikacin 150mg IV OD for 3 days
3. Tab Zyloric 50mg orally thrice a day
4. Tab 6 MP 25mg orally for 4 days
5. Inj. Cytarabine 35mg IV OD for 2 days
6. In Cytarabine 45mg (100mg/m²) IV in 100ml NS over 24 hours for 3 days (04.10.2024)
7. Inj. Etoposide 45mg IV in 150ml NS over 4 hours OD for 3 days (04.10.2024)

CONDITION AT THE TIME OF DISCHARGE

Stable

ADVICE AT DISCHARGE

- To give emset 3ml orally if vomits
- Tab. Voriconazole 50mg - 50mg orally twice a day (keep 2 hours gap from food)
- Syp Acivir 2.5 ml twice a day
- Tab Eltrombopeg 25mg orally once a day 6 am (4 hr fasting) on alternate days
- Syp Septran 3 ml twice a day on Saturday and Sunday
- Chlorhexidine mouth wash four times a day
- Candid Mouth paint 2 drops orally thrice a day
- Sitz bath twice a day

Follow up with Dr. Chintan Vyas on 11.10.2024 with CBC

EMERGENCY MANAGEMENT

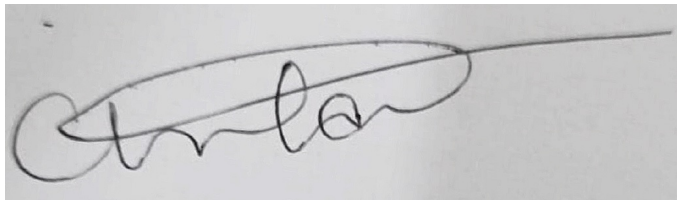
Contact Details: In case of any queries or emergencies please contact, Phone No: 022 7122 2555

CARE TEAM DETAILS

Dr. Chintan T Vyas
CONSULTANT

-
-

SIGNOFF DETAILS



Dr. Chintan T Vyas

CONSULTANT

PAEDIATRIC ONCOLOGY, HAEMATO-ONCOLOGY & BMT

This summary has been explained to me in a language that I understand, and a printed copy of the same has been issued to me.

SIGNATURE

DATE

NAME

RELATION

Prepared By: Dr. Aayushi Agrawal | Prepared On: 08.10.2024 13:33

Generated By: Shravani Keer | Generated On: 09.10.2024 10:39