CHRISTIAN MEDICAL COLLEGE
VELLORE - 4
RADIATION ONCOLOGY UNIT I

DISCHARGE SUMMARY

Consultants

Dr. Selvamani MBBS., MD., DNB	Professor	Email	rt@cmcvellore.ac.in
Dr. Simon Pavamani MD	Professor	Tel	(0416) 4213145 / 3073145
Dr. Thomas Samuel Ram MD	Professor	Fax	(0416) 2232035 / 2232103
Dr. Balukrishna. S DMRT, MD, DNB	Associate Professor		
Dr. Sunitha Susan Varghese MD, DNB, DMRT	Assistant Professor		
Dr. Prabhakar M. MBBS, MD	Senior Resident		

Name : THOMAS VARGHESE **Hospital Number :**921337D

Age : 63 **Sex :** Male **Ward :** A6 **Admitted On :** 19-May-2014 **Discharged On:** 22-May-2014

Diagnosis: CARCINOMA RECTUM
POST LCCRT, POSTOP, POST ADJUVANT FOLFOX TILL FEBRUAR2012
NODAL(RETROCAVAL AND PARA AORTIC NODAL), LIVER, ADRENAL AND LUNG METASTASIS FEBRUARY 2014
SECOND LINE CHEMOTHERAPY
CYCLE 3 DAY 1 FOLFIRI

History

Mr Thomas Varghese had been diagnosed to have carcinoma rectum T3N1M0 for which he received neoadjuvant chemoirradiation followed by low anterior resection on 08.08.11. He received five cycles of adjuvant chemotherapy with mFOLFOX 6 till February 2012 and was on regular follow up (kindly check previous reports for details).

He was found to have raising CEA levels in February 2014 and PET CT scan done elsewhere showed metastasis in liver, adrenals and lung. He received second line palliative chemotherapy with FOLFIRI and is presently admitted for Cycle 3 Day 1 of the same.

Post cycle 2 day 1 chemotherapy, he developed febrile neutropenia at hometown and was treated for the same. He lost significant weight. Present cycle chemotherapy doses was adjusted according to the present weight. Imaging of the abdomen and pelvis showed stable disease.

He is a known hypertensive on regular medication for the same.

Physical Examination

ECOG-1. Vitals-Stable.
He has no pallor or generalised adenopathy.

RS: Bilaterally clear
Abd: Soft, No Organomegaly, laparotomy scar present.

Investigations

19/05/2014	HAEMOGLOBIN	10.3	GM%

19/05/2014	PLATELET COUNT [manual if less than 1 lakh]	285000	CC.MM
19/05/2014	WBC TOTAL	7400	/CU MM
19/05/2014	WBC DIFFERENTIAL		
	BLASTS		%
	PROMYELOCYTES		%
	MYELOCYTES		%
	METAMYELOCYTES		%
	BANDFORMS		%
	NEUTROPHILS	65	%
	EOSINOPHILS	6	%
	BASOPHILS	1	%
	LYMPHOCYTES	18	%
	MONOCYTES	10	%
	NUCL RED CELLS	0.0	/100 WBC
19/05/2014	AST (SGOT)	18	U/L
19/05/2014	ALT (SGPT)	12	U/L
19/05/2014	ALKALINE PHOSPHATASE	133	U/L
19/05/2014	CREATININE	1.64	mg%

19-MAY-2014 MRI ABDOMEN AND PELVIS
63-year male with carcinoma rectum postop RT with disease progression, MRI shows
Comparison made to previous MRI dated April 2012

1.Status low anterior resection and colorectal anastamosis.
Minimal fat stranding around the anastamotic site and thickening of the mesorectal fascia - postop change.
2. Multiple well-defined T2 hyperintense lesions seen in both lobes of the liver largest measuring approximately 24 X19.5 mm in the left lateral segment- new finding
3. Multiple enlarged para-aortic nodes measuring up to 28 mm sad in left para-aortic region ; enlarged left common iliac nodes measuring up to 14.5 mm-new finding
4. Left moderate hydroureteronephrosis due to ureteric compression by para-aortic nodes- no hydronephrosis previously
5. No significant wall thickening at the anastomotic site
6. Bilateral adrenals are bulky, right more than left
7. Few well-defined nodular lesions in the visualised lung bases- likely metastasis
8. No new bone lesion
Overall features suggestive of disease progression

Discussion & Treatment

Mr Thomas and his family were explained about the disease status. The present MRI was compared with much earlier CT scan and when it was compared with PET CT scan only the retrocaval node was increased marginally in size and the rest of the disease was stable. In discussion with the patient and family it was decided to add Bevacizumab and he receieved cycle 3 day 1 chemotherapy as follows.

Details of chemotherapy:

Height : 171 cm Weight : 61 kg BSA : 1.71 m2
Estimated creatinine clearance : 40 ml/min/1.73 m2

After appropriate premedication he was administered chemotherapy

Inj. Bevacizumab 300 mg (5mg/kg) was administered in 250 ml normal saline over 90 mins on 20.05.2014.

Inj Irinotecan (180mg/m2 80% of the calculated dose) 240mg in one pint 5% Dextrose IV over 2 hrs on 20.05.2014.

Inj Leucovorin (200mg/m2) 250mg in one pint 5% Dextrose IV over 2 hours on 20.05.2014.

Inj 5 FU (400mg/m2) 500mg slow iv bolus on 20.05.2014.

op: 9917
C/o Lt and Liver

(1)

M.R.I Copies.

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Dr. Sunitha Susan Varghese MD, DNB, DMRT	Assistant Professor		
Dr. Prabhakar M. MBBS, MD	Senior Resident		

Name : THOMAS VARGHESE **Hospital Number :** 921337D

Age : 63 **Sex :** Male **Ward :** A7 **Admitted On :** 23-Jul-2014

Discharged On: 24-Jul-2014

Diagnosis: CARCINOMA RECTUM
POST LCCRT, POSTOP, POST ADJUVANT FOLFOX TILL FEBRUAR2012
NODAL(RETROCAVAL AND PARA AORTIC NODAL),LIVER, ADRENAL AND LUNG METASTASIS FEBRUARY 2014
SECOND LINE CHEMOTHERAPY
DISEASE PROGRESSION ON SECOND LINE

History

Mr Thomas Varghese had been diagnosed to have carcinoma rectum stage T3N1M0 for which he received neoadjuvant chemoirradiation followed by low anterior resection on 08.08.11. He received five cycles of adjuvant chemotherapy with mFOLFOX 6 till February 2012 and was on regular follow up (kindly check previous reports for details).

He was found to have raising CEA levels in February 2014 and PET CT scan showed metastasis in liver, adrenals and lung. He received palliative chemotherapy with FOLFIRI and Bevacizumab. He received 4 cycles of the same. He was presently admitted for disease evaluation and further managemant. He had complaints of low back ache, decreased appetite and easy fatiguability at the time of admission.

Physical Examination

ECOG-1.
Pulse:88/min BP:130/70mmhg
He has no pallor or generalised adenopathy
RS:Bilaterally clear
Abd: Soft, No Organomegaly, laparotomy scar present.
Lower lumbar tenderness present.

Investigations

22/07/2014	HAEMOGLOBIN		10.8	GM%
22/07/2014	PLATELET COUNT	[manual if less than 1 lakh]	402000	CC.MM
22/07/2014	WBC TOTAL		9000	/CU MM
22/07/2014	WBC DIFFERENTIAL			
	BLASTS			%
	PROMYELOCYTES			%
	MYELOCYTES			%
	METAMYELOCYTES			%
	BANDFORMS			%
	NEUTROPHILS		73	%

	EOSINOPHILS	2	%
	BASOPHILS	1	%
	LYMPHOCYTES	14	%
	MONOCYTES	10	%
	NUCL RED CELLS	0.1	/100 WBC
22/07/2014	AST (SGOT)	20	U/L
22/07/2014	ALT (SGPT)	13	U/L
22/07/2014	ALKALINE PHOSPHATASE	134	U/L
22/07/2014	CREATININE	1.49	mg%

Study Date: 22-JUL-2014
Examination: MRI ABDOMEN AND PELVIS

LIVER -
Multiple T2 hyperintense nodules of varying sizes scattered in the liver,largest 28x22 mm in the left lobe
No IHBRD.
SPLEEN - normal
GB - normal
PANCREAS - mild diffuse thinning of pancreas
ADRENALS - thickened adrenals bilaterally
KIDNEYS -
Right - normal
Left - moderate hydroureteronephrosis due to ureteric compression by left lower paraaortic nodes
BOWEL, MESENTERY, OMENTUM -
Status LAR.
No obvious lesions at the anastomosis
LYMPHADENOPATHY :
*left lower paraaortic nodes,measuring ~30x26 mm
*left common iliac nodes measuring 22x13 mm
*multiple paraaortic,aortocaval nodes upto 32 mm on left side
FLUID - no free fluid
BLADDER : normal
PROSTATE : nil significant
SEMINAL VESICLES :nil significant
INGUINAL ORIFICES - nil significant
ABDOMINAL WALL - nil significant
BLOOD VESSELS - nil significant
VISUALISED LUNG BASES -T2W hyperintense nodules (3 in no) in the lung bases,R>L
VISUALISED BONES - nil significant

IMPRESSION:
64 year old male with Ca rectum,post LCCRT,LAR with liver,lung lesions on follow up,MRI showing

1.Status LAR with no obvious lesions at the anastomosis.
2.Multiple lymphadenopathy as mentioned below
*left lower paraaortic nodes,measuring ~30x26 mm
*left common iliac nodes measuring 22x13 mm
*multiple paraaortic,aortocaval nodes upto 32 mm on left side
3.Multiple T2W hyperintense lesions scattered in the liver,largest 28x22 mm in the left lobe - metastasis.
4.T2W hyperintense nodules (3 in no) in the lung bases,R>L - metastasis
5.Moderate left hydroureteronephrosis due to ureteric compression by lower paraaortic nodes
6.Thickened adrenal bilaterally.

On comparison with previous MRI dated May 2014,there is
*increase in size of liver lesions
*increase in size of lung lesions
*no significant change in size of paraaortic nodes
*no significant change in hydronephrosis
Overall features of disease progression.
Dr.Anu Eapen

Discussion & Treatment

Mr Thomas completed 4 cycles of chemotherapy with FOLFIRI-Bevacizumab and has come presently for disease evaluatuion. MRI of abdomen and pelvis showed disease progression. It was thus decided to offer him second line palliative chemotherapy with CapOx regimen and Bevacizumab followed by assesment for response to chemotherapy.

op. 7917
Ca lung, Liver (2)

Name	MR.THOMAS VARGHESE	ID	IGH27252
Age & Gender	64Y/MALE	Visit Date	06/11/2014
Ref Doctor	DR. KRISHNA KUMAR S.		

Clinical Notes: Ca colon treated

Plain And Contrast CT Scan Of Thorax

Volume sections of the thorax were studied from the apices to the base of both lungs before and after administration of I .V contrast using 64 slice MD CT Somatom Sensation .

- The study shows normal lung parenchymal pattern with even distribution of pulmonary vascular branches and that of the bronchial tree . Two well defined rounded lesions of size 1.5 cm diameter each are noted in apical segment of left lower lobe and anterior basal segment of right lower lobe.
- The anatomical configuration of the structures in the mediastinum and both hilar regions are within normal limits .
- There is no evidence of pleural effusion / thickening .
- Soft tissues of chest walls and bony thorax show no obvious abnormality .
- Both hemidiaphragms appear normal .
- No evidence of subdiaphragmatic pathology seen .

Impression:-

- **Well defined round enhancing lesion involving apical segment of left lower lobe and anterior basal segment of right lower lobe, suggestive of metastasis.**
- **No mediastinal adenopathy.**
- **No pleural effusion. No evident lesion involving chest wall.**

Dr.Anil Kumar MD DNB

Dr.Amel Antony MD DNB MNAMS

Dr.Randall Varghese DMRD DNB

Name	MR.THOMAS VARGHESE	ID	IGH27252
Age & Gender	64Y/MALE	Visit Date	06/11/2014
Ref Doctor	DR. KRISHNA KUMAR S.		

Plain And Contrast CT Scan Of Whole Abdomen

Serial axial volume acquisition was performed on 64 slice CT-Siemens Somatom Sensation from the level of domes of diaphragm on to pelvic outlet after administration of oral contrast and before and after administration of I.V contrast using MEDTRON pressure injector and overlapping sections were obtained.

- The liver is of normal attenuation, size and shape with smooth margins. On administration of IV iodinated contrast there is homogenous parenchymal enhancement. Multiple focal lesions (8-9 in nos) of size varying from 1 cm to 2 cm diameter are noted scattered in both lobes of liver. There is no evidence of any dilatation of intra hepatic biliary radicles. Visualized CBD appears normal.
- Gall bladder shows no evident wall thickening .
- Pancreas is of normal size and shape with homogenous enhancement pattern. There is no evidence of any focal lesion, calcification or ductal dilatation. Peri pancreatic fat appear normal.
- Spleen show normal size and shape with no evident focal / diffuse enlargement or change in attenuation.
- Both kidneys show normal size and position with prompt parenchymal enhancement. The pelvicalyceal systems show normal size and shape as also good opacification. Visualized ureters show no abnormal dilatation, narrowing or hold up of contrast.
- The retroperitoneal space shows few paraaortic lymphnodes at level of renal hilum on both sides.
- There is no free fluid in the abdomen
- Visualized bowel loops show no evident wall thickening, fixity or persistent narrowing.
- Prostatomegaly noted. Seminal vesicles are normal.

IMPRESSION :

- **Multiple focal lesions involving both lobes of liver suggestive of ? metastasis.**
- **Few retroperitoneal lymphnodes.**
- **No ascites. Two nodules in lungs suggestive of lung metastases.**

Dr.Anil Kumar MD DNB

Dr.Amel Antony MD DNB MNAMS

Dr.Randall Varghese DMRD DNB

Op. 9917

CA. Rectum post chem/Radiation to Liver. Hyp. Lymph.

(1)

PATIENTS NAME	: Mr. THOMAS VARGHESE	Pat. ID	: 101460521	Sample Coll.	: 22/08/2014 15:27
AGE	: 64 Years / MALE	Reg. DATE	: 22/08/2014	Sample Acc.	: 23/08/2014 06:41
REFERRED BY Dr	: S. KRISHNAKUMAR	IP/ OP No.	:	Report Auth.	: 28/08/2014 14:58
Client Name	: NA			Report Status :	FINAL

Department Of Biochemistry

PARAMETER		OBSERVED VALUE	UNITS	REFERENCE RANGE
** CYFRA 21.1	:	9.51	ng/ml	< 3.30

CYFRA 21-1 Also known as Cytokeratin 19 Fragment.

Cytokeratins are intermediate filament structural proteins found in the cytoskeleton of epithelial tissue.They are divided into two types based on sequence homology: acidic type I cytokeratins and basic or neutral type II cytokeratins.Cytokeratins are usually found as dimers composed of a type I and a type II cytokeratin, which are further organized into filamentous structures by forming tetramers. The release of cytokeratins into circulation likely occurs by numerous mechanisms such as cellular apoptosis,abnormal mitosis, or spill-over from proliferating cells. When present, cytokeratins are detected as partially degraded, single protein fragments or complexes and not as intact molecules. Elevated serum concentrations of specific cytokeratins are observed in patients with lung cancer of all histologic types. A fragment of cytokeratin 19, cytokeratin fragment 21-1 (CYFRA 21-1),has been extensively studied in patients with non-small cell lung cancer and has been demonstrated to be clinically useful.

CYFRA 21-1 is the most sensitive serum tumor marker for non-small cell lung cancer.
Serum concentrations o fCYFRA21-1 correlate with tumor burden.
CYFRA 21-1 is an independent prognostic factor for non-small cell lung cancer.
Decreasing concentrations of CYFRA21-1 after chemotherapy appear to be a reliable marker of treatment efficacy.

Technique Used: ELISA

NABL Accredited

M-0687

Riju Mathew M.Sc.,Med.Biochemistry,
Chief Biochemist & QM

NOTE : - * L= Low , * H= High, ** The tests marked with ** are not accredited by NABL.

SHIBI JOSE : 28/08/2014 06:25:10PM

PATIENT'S NAME	: Mr. THOMAS VARGHESE	Pat. ID	: 101460521	Sample Coll.	: 22/08/2014 15:27
AGE	: 64 Years / MALE	Reg. DATE	: 22/08/2014	Sample Acc.	: 22/08/2014 16:09
REFERRED BY Dr	: S. KRISHNAKUMAR	IP/ OP No.	:	Report Auth.	: 23/08/2014 09:57
Client Name	: NA			Report Status :	FINAL

Department Of Biochemistry

PARAMETER		OBSERVED VALUE	UNITS	REFERENCE RANGE
** Gamma Glutamyl Trans Peptidase Technique used : Spectrophotometry	:	H 86.0	U/L	5 - 85
** Serum Ca 19.9 (Pancreatic Cancer Marker) Technique used: ELFA		2.00	U/ml	Upto 37
** Prostate Specific Antigen Technique used: CLIA	:	1.05	ng/ml	0 - 4
** Serum Beta 2 Microglobulin Technique used: ELFA	:	H 5.20	mg/l	0.81 - 2.19

*** END OF REPORT ***

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Client Name	: NA			Report Status :	FINAL

Department Of Biochemistry

PARAMETER		OBSERVED VALUE	UNITS	REFERENCE RANGE
** SERUM NEURON SPECIFIC ENOLASE	:	14.20	ng/mL	0 - 17

Note 1. False negative / positive results are observed in patients receiving mouse monoclonal antibodies for diagnosis or therapy.

2. NSE values regardless of levels should not be interpreted as absolute evidence of the presence or absence of disease. All values should be correlated with clinical findings and results of other investigations.

3. NSE values obtained with different assay methods or kits cannot be used interchangeably.

Clinical use
Monitoring disease progression and therapy inpatients with small cell lung carcinoma and Neuroendocrine tumours.

Increased levels
Malignant neuroendocrine diseases like Carcinoid tumor, Medullary thyroid carcinoma, Merkel cell tumor of the skin, Carcinoma or Pancreas and Adrenal medulla.

Benign lung disease.

*** END OF REPORT ***

NABL Accredited

M-0607

Riju Mathew M.Sc.,Med.Biochemistry,
Chief Biochemist & QM

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Benign lung disease.

*** END OF REPORT ***

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SHIBI JOSE 28/08/2014 06:25:10PM

PATIENT'S NAME	: Mr. THOMAS VARGHESE	Pat. ID	: 101473549	Sample Coll.	: 16/10/2014 12:28
AGE	: 64 Years / MALE	Reg. DATE	: 16/10/2014	Sample Acc.	: 16/10/2014 14:51
REFERRED BY Dr	: S. KRISHNAKUMAR	IP/ OP No.	:	Report Auth.	: 18/10/2014 16:00
Client Name	: NA			Report Status :	FINAL

Department Of Biochemistry

PARAMETER		OBSERVED VALUE	UNITS	REFERENCE RANGE
* CYFRA 21.1	:	1.20	ng/ml	< 3.30

CYFRA 21-1 Also known as Cytokeratin 19 Fragment.

Cytokeratins are intermediate filament structural proteins found in the cytoskeleton of epithelial tissue.They are divided into two types based on sequence homology: acidic type I cytokeratins and basic or neutral type II cytokeratins.Cytokeratins are usually found as dimers composed of a type I and a type II cytokeratin, which are further organized into filamentous structures by forming tetramers. The release of cytokeratins into circulation likely occurs by numerous mechanisms such as cellular apoptosis,abnormal mitosis, or spill-over from proliferating cells. When present, cytokeratins are detected as partially degraded, single protein fragments or complexes and not as intact molecules. Elevated serum concentrations of specific cytokeratins are observed in patients with lung cancer of all histologic types. A fragment of cytokeratin 19, cytokeratin fragment 21-1 (CYFRA 21-1),has been extensively studied in patients with non-small cell lung cancer and has been demonstrated to be clinically useful.

CYFRA 21-1 is the most sensitive serum tumor marker for non-small cell lung cancer.
Serum concentrations o fCYFRA21-1 correlate with tumor burden.
CYFRA 21-1 is an independent prognostic factor for non-small cell lung cancer.
Decreasing concentrations of CYFRA21-1 after chemotherapy appear to be a reliable marker of treatment efficacy.

Technique Used: ELISA

Manoj Varghese M.Sc.,Med.Biochemistry.
Sr.Biochemist & QM

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AGE	: 64 Years / MALE	Reg. DATE	: 16/10/2014	Sample Acc.	: 16/10/2014 12:49
REFERRED BY Dr	: S. KRISHNAKUMAR	IP/ OP No.	:	Report Auth.	: 16/10/2014 14:51
Client Name	: NA			Report Status :	FINAL

Department Of Biochemistry

PARAMETER		OBSERVED VALUE	UNITS	REFERENCE RANGE
• Gamma Glutamyl Trans Peptidase	:	37.0	U/L	5 - 85
Technique used : Spectrophotometry				
• Serum Beta 2 Microglobulin	:	H 3.55	mg/l	0.81 - 2.19
Technique used: ELFA				

*** END OF REPORT ***

Manoj Varghese M.Sc.,Med.Biochemistry,
Sr.Biochemist & QM

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AGE	: 64 Years / MALE	Reg. DATE	: 16/10/2014	Sample Acc.	: 16/10/2014 14:51
REFERRED BY Dr	: S. KRISHNAKUMAR	IP/ OP No.	:	Report Auth.	: 18/10/2014 16:00
Client Name	: NA			Report Status :	FINAL

Department Of Biochemistry

PARAMETER		OBSERVED VALUE	UNITS	REFERENCE RANGE
• SERUM NEURON SPECIFIC ENOLASE	:	7.90	ng/mL	0 - 17

Note 1. False negative / positive results are observed in patients receiving mouse monoclonal antibodies for diagnosis or therapy.

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3. NSE values obtained with different assay methods or kits cannot be used interchangeably.

Clinical use
Monitoring disease progression and therapy inpatients with small cell lung carcinoma and Neuroendocrine tumours.

Increased levels
Malignant neuroendocrine diseases like Carcinoid tumor, Medullary thyroid carcinoma, Merkel cell tumor of the skin, Carcinoma or Pancreas and Adrenal medulla.

Benign lung disease.

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AMALA JOSHY : 20/10/2014 10:51:09AM