**DEPARTMENT OF NUCLEAR MEDICINE AND PETCT**

**Date : 25/01/2012**

**Clinical Indication : Ca Right Tongue S/P Wide Local Excision & radiotherapy, now with indurated**

**swelling in undersurface of posterior tongue - For evaluation.**

**WHOLE BODY PET CT IMAGING REPORT**

**PROCEDURE :**

8 mCi of 18F Flouro Deoxy Glucose (FDG) was injected IV in fasting status. One hour later Whole body PET

CT Imaging (Head to mid thigh) was performed on a GE Discovery PET 8 slice CT scanner.

Oral & IV contrast given for CT study.

Standardized Uptake Value (SUV) calculated for body weight and expressed as g/ml.

Fasting Blood Sugar: 137 mg / dl.

**FINDINGS :**

PET FINDINGS:

\* Abnormal increased focal FDG uptake noted in heterogenously enhancing lesion right anterolateral

aspect of tongue crossing the mid line (SUV Max 5.9).

\* No abnormal FDG uptake in posterior tongue, cervical lymph nodes and rest of oro cavity.

\* No abnormal focal / diffuse FDG uptake seen in other lymph nodes, bilateral lungs, liver, spleen,

adrenal glands and skeleton imaged up to mid thigh.

\* Normal physiological FDG uptake seen in brain, pharyngeal tonsils, vocal cords, myocardium, liver,

intestinal loops, kidneys and urinary bladder.

CT FINDINGS:

Brain:

\* Normal neuroparenchyma. No focal lesion.

Neck:

\* Heterogenously enhancing lesion seen involving right antero-lateral aspect of tongue, crossing mid-line.

\* Small discrete bilateral level II lymph nodes (FDG non avid) seen.

\* Nasopharynx, laryngopharynx and thyroid gland appear normal.

\* Common carotid artery and internal jugular vein appear normal.

Chest:

\* Fibrotic foci seen in apicoposterior segment of left upper lobe. No obvious lung nodules.

\* Mediastinum is central.

\* Cardia and major vessels are normal.

\* No pleural effusion.

Abdomen:

\* Liver, gall bladder, spleen and pancreas appear normal.

\* Adrenals, kidneys and urinary bladder appear normal.

\* No retroperitoneal mass lesion.

\* No significant lymphadenopathy.

\* Contrast filled bowel loops are normal.

\* hemangioma seen in D6, D12 vertebral bodies.

**CONCLUSION :**

\* FDG AVID ENHANCING LESION IN RIGHT ANTEROLATERAL ASPECT OF TONGUE

CROSSING THE MID LINE

- ? RESIDUAL PRIMARY TONGUE MALIGNANCY / ? RADIOTHERAPY CHANGES.

WARRANTS HISTOPATHOLOGICAL CORRELATION.

\* NO EVIDENCE OF ANY FDG AVID LYMPH NODAL OR DISTANT METASTASIS.

**MDCT NECK - CONTRAST**

*Post excision for Ca tongue*

Post surgical changes seen.

A hypodense lesion with enhancing walls is noted in the tongue extending across midline. It measures 2.5x2.3cm. Subcentimeteric level Ia, bilateral Ib and level II nodes seen.

Brain parenchyma appears normal.

Left upper fibrosis with mild bronchiectasis noted.

No suspicious bony lesions.

**IMPRESSION**

* **Hypodense tongue lesion with enhancing walls extending across midline as described -possibility of Recurrence to be considered.**

**DEPARTMENT OF PATHOLOGY**

**SURGICAL PATHOLOGY REPORT**

**Date of sample collection :** 08/03/2012

**Received on :** 08/03/2012

**Reported Date :** 09/03/2012

**Clinical Impression :**

Slide and block for review.

**Gross Description :**

Received for review are 3 slides and 2 blocks.

First and second slide labelled as "6350 C and A".

Third one labelled as " 6533 A/12".

2 blocks with two labelling, one block as "15879/11, 6350 D/12" and "3150 B2/11, 6350 B/12".

**Microscopic Description :**

Multiple sections studied from the tongue shows an ulcerated stratified squamous lined mucosa with an

infiltrating neoplasm composed of cells arranged in lobules, islands and nests. The cells are polygonal with

moderate eosinophilic cytoplasm, round to oval moderate eosinophilic cytoplasm, round to oval vesicular nuclei,

promiennt nucleoli and mitosis. Individual cell keratinisation and intercellular bridging noted. The tumour has an

infiltrative border with moderate lymphoplasmacytic infiltrate.

**Impression :**

Slide review (6350/12 and 6533/12) :

Biopsy Tongue : Moderately differentiated squamous cell carcinoma.

**SURGICAL PATHOLOGY REPORT**

**Date of sample collection :** 20/03/2012

**Received on :** 24/03/2012

**Reported Date :** 26/03/2012

**Clinical Impression :**

Carcinoma tongue

Gross Description : Received fresh is a specimen labelled as "subtotal glossectomy", consists of portion of

tongue measuring 6.2x6x5cm. Posterior surface inked. Right lateral aspect shows a nodular lesion measuring

3x3x4cm. Surface shows hemorrhagic foci. Cut section shows a well circumscribed grey white glistening

growth with central necrotic area measuring 3.5x5.5x2.5cm. Lesion is located 0.9cm from the posterior soft

tissue margin and one area shows ? fibrotic tissue ? tumour is close to posterior margin. Inferiorly the free

margin is 1cm. Tumour is situated right 2.5cm form lateral mucosal margin and 2.5cm away from left lateral

mucosal margin.

Frozen read as : Margins are away from lesion.

The remaining specimen transfered into formalin and representative sections are submitted as follows:

FSR 1- Posterior soft tissue margin

FSR 2 - Tumor with tagged inferior margin

FSR 3 - Inferior margin

FSR 4 - From tumor.

FB 1 to 3 - From tumor.

Subsequently reveived in formalin are seven specimens. The I specimen labelled as "Right level Ia", consists of

single fibrofatty tissue measures 3x2x0.5cm. 1 lymphnode identified. Cut section grey brown measures

0.5x0.5x0.5cm. Representative sections are submitted in cassette A.

Specimen II labelled as "Left level Ib", consists of single fibrofatty tissue bit measures 5.5x4x2cm. 4

lymphnodes identified, largest one measures 1x1x1cms. Cut section grey brown. Representative sections are

submitted in B1 - B3 cassettes.

Specimen III labelled as "Left level IIB", consists of single fibrofatty tissue measures 4x2x0.5cm. ? 1 lymphnode

identified. Representative sections are submitted in cassette C.

Specimen IV labelled as "Level IIa", consists of single fibrofatty tissue bit measures 5x3.5x0.9cm. 5 lymphnodes

identified largest one measures 1x1x1cms. Cut section grey brown. Representaitve sections are submitted in D1 -

D2 cassettes.

Specimen V labelled as "Left level III and IV" consists of fibrofatty tissue bit measures 3x3x0.5cms. 3

lymphnodes identified largest measures 0.5x0.5x0.5cm. Cut section grey brown. Representative sections are

submitted in E1 - E2 cassettes.

Specimen VI labelled as "Right level Ib", consists of single fibrofatty tissue bit measures 5x4x1cm, largest

measures 0.5x0.5x0.5cm. 2 lymphnodes identified. Cut section grey brown. Representative sections are

submitted in F1 - F2 cassettes.

Specimen VII labelled as "Right level II,III,IV neck nodes", consists of fibrofatty tissue measures 6x5x1.5cms. 9

lymphnodes identified, largest one measures 1x1x1cm. Cut section grey brown. Representative sections are

submitted in G1 - G4 cassettes.

Microscopic Description : Permanent sections from frozen confirms frozen report:-

FSR - Total glossectomy specimen:-

- Squamous cell carcinoma - well differentiated

- Tumor size 3.5x5.5x2.5cm

- Tumor has pushing margins with moderate chronic inflammatory infiltrate

- Depth of invasion 2.5cm

- No lymphovascular / perineural invasion seen

- All resection margins are free and well away

A) Right level Ia - Single reactive lymphnode

B) Left level Ib - 4 reactive nodes and normal salivary gland tissue

C) Left level IIb - 3 reactive nodes

D) Left level IIa - 3 reactive nodes

E) Left level III and IV - 4 reactive nodes

F) Right level Ib - Single reactive node. Normal salivary gland tissue is seen

G) Right level II, III and IV - 10 reactive nodes

Diagnosis : Total glossectomy specimen + bilateral neck dissection:-

- Squamous cell carcinoma - well differentiated

- Tumor size 3.5x5.5x2.5cm

- Depth of invasion 2.5cm

- No lymphovascular / perineural invasion seen

- All resection margins are free and well away

- 26 reactive nodes.

pT3NxMx.

**SURGICAL PATHOLOGY REPORT**

**Date of sample collection :** 20/03/2012

**Received on :** 20/03/2012

**Reported Date :** 24/03/2012

**Clinical Impression :**

Carcinoma tongue

**Gross Description :**

Received fresh is a specimen labelled as "subtotal glossectomy", consists of portion of tongue measuring

6.2x6x5cm. Posterior surface inked. Right lateral aspect shows a nodular lesion measuring 3x3x4cm. Surface

shows hemorrhagic foci. Cut section shows a well circumscribed grey white glistening growth with central

necrotic area measuring 3.5x5.5x2.5cm. Lesion is located 0.9cm from the posterior soft tissue margin and one

area shows ? fibrotic tissue ? tumour is close to posterior margin. Inferiorly the free margin is 1cm. Tumour is

situated right 2.5cm form lateral mucosal margin and 2.5cm away from left lateral mucosal margin.

Frozen read as : Margins are away from lesion.

The remaining specimen transfered into formalin and representative sections are submitted as follows:

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FSR 4 - From tumor.

FB 1 to 3 - From tumor.

Subsequently reveived in formalin are seven specimens. The I specimen labelled as "Right level Ia", consists of

single fibrofatty tissue measures 3x2x0.5cm. 1 lymphnode identified. Cut section grey brown measures

0.5x0.5x0.5cm. Representative sections are submitted in cassette A.

Specimen II labelled as "Left level Ib", consists of single fibrofatty tissue bit measures 5.5x4x2cm. 4

lymphnodes identified, largest one measures 1x1x1cms. Cut section grey brown. Representative sections are

submitted in B1 - B3 cassettes.

Specimen III labelled as "Left level IIB", consists of single fibrofatty tissue measures 4x2x0.5cm. ? 1 lymphnode

identified. Representative sections are submitted in cassette C.

Specimen IV labelled as "Level IIa", consists of single fibrofatty tissue bit measures 5x3.5x0.9cm. 5 lymphnodes

identified largest one measures 1x1x1cms. Cut section grey brown. Representaitve sections are submitted in D1 -

D2 cassettes.

Specimen V labelled as "Left level III and IV" consists of fibrofatty tissue bit measures 3x3x0.5cms. 3

lymphnodes identified largest measures 0.5x0.5x0.5cm. Cut section grey brown. Representative sections are

submitted in E1 - E2 cassettes.

Specimen VI labelled as "Right level Ib", consists of single fibrofatty tissue bit measures 5x4x1cm, largest

measures 0.5x0.5x0.5cm. 2 lymphnodes identified. Cut section grey brown. Representative sections are

submitted in F1 - F2 cassettes.

Specimen VII labelled as "Right level II,III,IV neck nodes", consists of fibrofatty tissue measures 6x5x1.5cms. 9

lymphnodes identified, largest one measures 1x1x1cm. Cut section grey brown. Representative sections are

submitted in G1 - G4 cassettes.

**Microscopic Description :**

Permanent sections from frozen confirms frozen report:-

FSR - Total glossectomy specimen:-

- Squamous cell carcinoma - well differentiated

- Tumor size 3.5x5.5x2.5cm

- Tumor has pushing margins with moderate chronic inflammatory infiltrate

- Depth of invasion 2.5cm

- No lymphovascular / perineural invasion seen

- All resection margins are free and well away

A) Right level Ia - Single reactive lymphnode

B) Left level Ib - 4 reactive nodes and normal salivary gland tissue

C) Left level IIb - 3 reactive nodes

D) Left level IIa - 3 reactive nodes

E) Left level III and IV - 4 reactive nodes

F) Right level Ib - Single reactive node. Normal salivary gland tissue is seen

G) Right level II, III and IV - 10 reactive nodes

**Diagnosis :**

Total glossectomy specimen + bilateral neck dissection:-

- Squamous cell carcinoma - well differentiated

- Tumor size 3.5x5.5x2.5cm

- Depth of invasion 2.5cm

- No lymphovascular / perineural invasion seen

- All resection margins are free and well away

- 26 reactive nodes.

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| **Date of Admission :**19/03/2012 | **Date of Procedure :**20/03/2012 |

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| **Date of Discharge :**02/04/2012 |

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| **DIAGNOSIS :** |
| Ca tongue- Rt lateral border- SCC |

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| **PROCEDURE DONE :** |
| WLE via a pull-through approach,b/l I-IV SND+ gracilis & omental(double free flap) reconstruction under GA on 20.3.2012 |

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| **HISTORY :** |
| Was diagnosed as SCC tongue outside. Had surgery in October 2011 in Caritas, Kottayam HPR: T1 lesion with close deep margin of 3mm Now with pain in the tongue and Rt ear Biopsy from : CMC vellore: MDSCC PET scan at AIMS on 25.1.12- no evidence of distant mets or LN mets |

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| **CLINICAL EXAMINATION :** |
| :Mouth opening is good, partially dentate small ulcer with induartion involving whole oral tongue except small edge of Lt side tongue, and Rt side floor of mouth mandible is free Base tongue and valleculae and hypopharynx, larynx : normal Neck: NED Imp. Ca tongue recurrence T4N0M0 |

**INVESTIGATIONS :**

**Haemogram:**

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| **Date:** | **Hb: g/dl** | **PCV: %** | **PLT: ku/ml** | **TC: ku/ml** | **DC: N %** | **L: %** | **E: %** | **ESR: mm/1st hr** |
| 21/03/2012 | 11.1 | 31.9 | 258.0 | 7.56 | 87.1 | 8.41 | 0.154 | - |
| 22/03/2012 | 10.4 | 30.0 | 246.0 | 11.8 | 85.0 | 7.8 | 0.026 | - |
| 23/03/2012 | 9.99 | 28.9 | 252.0 | 10.3 | 85.6 | 8.42 | 0.093 | - |

**Liver Function Test:**

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| **Date:** | **T. Bilirubin: mg/dl** | **D. Bilirubin: mg/dl** | **SGOT: IU/L** | **SGPT: IU/L** | **ALP: IU/L** | **T. Protein: gms/dl** | **S. Alb: g/dl** | **S. Glob: g/dl** |
| 21/03/2012 | - | - | - | - | - | - | 2.01 | - |

**Renal Function Test and Serum Electrolytes:**

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| **Date:** | **Urea: mg/dl** | **Creatinine: mg/dl** | **Na+: mEq/L** | **K+: mEq/L** |
| 20/03/2012 | - | - | 131.7 | 5.55 |
| 21/03/2012 | 23.9 | 0.92 | 130.2 | 3.87 |
| 23/03/2012 | - | - | 131.2 | 3.5 |

Date: 24/03/2012

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| RDW-Blood : 13.3 % |  |

Date: 23/03/2012

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| RBC-COUNT-Blood : 3.5 M/uL | MCV-Blood : 82.7 fL |

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| MCH-Blood : 28.5 pg | MCHC-Blood : 34.5 g/dl |

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| RDW-Blood : 13.3 % | MPV-Blood : 6.49 fL |

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| MONO -Blood : 5.41 % | BASO-Blood : 0.466 % |

Date: 22/03/2012

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| RBC-COUNT-Blood : 3.66 M/uL | MCV-Blood : 82.0 fL |

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| MCH-Blood : 28.5 pg | MCHC-Blood : 34.8 g/dl |

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| RDW-Blood : 14.0 % | MPV-Blood : 6.47 fL |

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| MONO -Blood : 6.74 % | BASO-Blood : 0.451 % |

Date: 21/03/2012

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| RBC-COUNT-Blood : 3.84 M/uL | MCV-Blood : 83.1 fL |

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| MCH-Blood : 28.8 pg | MCHC-Blood : 34.7 g/dl |

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| --- | --- |
| RDW-Blood : 15.6 % | MPV-Blood : 7.81 fL |

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| MONO -Blood : 4.12 % | BASO-Blood : 0.215 % |

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| --- | --- |
| RBC-COUNT-Blood : 3.79 M/uL | MCV-Blood : 83.0 fL |

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| MCH-Blood : 28.9 pg | MCHC-Blood : 34.8 g/dl |

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| --- | --- |
| RDW-Blood : 15.7 % | MPV-Blood : 6.94 fL |

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| MONO -Blood : 5.2 % | BASO-Blood : 0.588 % |

Date: 20/03/2012

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| Glucose [F]-Plasma : 97.6 mg/dl |  |

Date: 19/03/2012

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| Compatibility test; cross match complete (3 tests) : Compatible |  |

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| PET CT in AIMS: FDG AVID ENHANCING LESION IN RIGHT ANTEROLATERAL ASPECT OF TONGUE CROSSING THE MID LINE - ? RESIDUAL PRIMARY TONGUE MALIGNANCY / ? RADIOTHERAPY CHANGES. WARRANTS HISTOPATHOLOGICAL CORRELATION. \* NO EVIDENCE OF ANY FDG AVID LYMPH NODAL OR DISTANT METASTASIS. Final HPR : Total glossectomy specimen + bilateral neck dissection:- - Squamous cell carcinoma - well differentiated - Tumor size 3.5x5.5x2.5cm - Depth of invasion 2.5cm - No lymphovascular / perineural invasion seen - All resection margins are free and well away - 26 reactive nodes |

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| **COURSE IN THE HOSPITAL AND DISCUSSION :** |
| Was admitted for surgery. Post op uneventful. Shifted to ward on POD5. Neck and abdomen sutures removed on day 7. Gracilis which was left out for inspection debrided and neck wound closed around it on POD 7. Diagnosed as DM in the ward on follow up. Endocrinology consultation sought and started on Insulin. Discharge advise given by endocrinology on call. As per HPR patient needs PORT. Seen by rad.oncology, dates given. Dental clearence done. Patient on jejunostomy feeds. Trial oral feeds attempted - did not tolerate.Seen by swallowing therapist - plan to withhold oral feeds and continue jejunostomy feeds only. |

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| **OPERATIVE FINDINGS :** |
| Operative notes - Horizontal neck crease incision. Bilateral level I-IV SND done. Anterior belly of digastric muscle cut. Mylohyoid and geniohyoid incised with adequate margin. Tongue pulled down. Lesion excised with adequate margins. Mandible free of tumour. Posterior third tongue free of tumour. Frozen section revealed closest margin 0.9 cm from posterior margin. Reconstruction with gracilis flap and free gastro omental flap. Gastric part anastamosed to the facial artery and vein. Gracilis inset into the hyoid and mandible. Anastamoses to the facial artery and EJU. Remaining gracilis pushed under the gastric flap for bulk. Drains placed, wound closed in layers. No undue complications |

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| **DISCHARGE MEDICATION :** |
| T.dolo 650 mg SOS T.sorbitate 10mg 1-1-1 T. betaloc 50mg 1-0-1 T.avas 20mg 0-0-1 Inj humalong 10-6-4 sc Inj. insultard 0-0-0-4 |

**Progress Notes**

**Date : 14/03/2012**

**ProgressNotes :**

HNS TB discussion done

plan for WLE+b/l ND+ flap plus Adjuvant

needs pain palliative consult for pain

today will take USG abdomen for intra op PEG

will put a med gastro consult once usg ready

PAC cleared - asked for cardio - cleared

date and FIC given

to keep in mind regarding the PEG and to speak to med gastro on call previos day

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| **OPERATIVE FINDINGS :** |
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