**SURGICAL PATHOLOGY REPORT**

**Date of sample collection :** 12/02/2021

**Received on :** 12/02/2021

**Reported Date :** 16/02/2021

**Clinical Impression :**

Carcinoma left tongue

**Gross Description :**

Received in formalin are 7 specimens.

The Ist specimen labelled "Tongue" consists of the same whole measuring 5x3.8x2cm. An ulcerative lesion seen

on the lateral side measuring 2.5x2.2x0.9cm. The lesion is at distance of 1.5cm from anterior mucosal and soft

tissue margin, 1.1 cm from posterior mucosal and soft tissue margin , 0.7cm from inferolateral mucosal and soft

tissue margin , 1cm from superomedial mucosal and soft tissue margin and 0.5cm from deep inked margin

The raw surface is inked and specimen serially sliced into 0.3cm slices .Cut surface of lesion appear firm, grey

white. Depth of lesion is 1cm. Representative sections are submitted as follows:

A1 - Anterior mucosal and soft tissue margin (radial)

A2 - Posterior mucosal and soft tissue margin (radial)

A3 - Superomedial mucosal and soft tissue margin (radial)

A4 - Inferolateral mucosal and soft tissue (salivary galnd) margin (radial)

A5 - Tumour with deep inked margin

A6 - Slice with maximum depth of invasion

A7 to A10- Tumour proper

Specimen II labelled "Level I A" consists of nodular fibrofatty tissue measuring 4x2.5x1.5cm. 3 lymph nodes

identified,largest measuring 1cm in greatest dimension. Smallest measuring 0.5cm in greatest dimension.

Entire specimen submitted in cassettes B1 to B3.

Specimen III labelled "Left level II A"consists of nodular fibrofatty tissue whole measuring 5x2.5x1cm. 5 lymph

nodes identified,largest measuring 1cm in greatest dimension. Smallest measuring 0.5cm in greatest dimension.

Entire specimen submitted in cassettes C1 to C3.

Specimen IV labelled "Left level II B"consists of nodular fibrofatty tissue whole measuring 2x1.5x1cm. 1 lymph

node identified measuring 0.2cm.Entire specimen submitted in cassette D

Specimen V labelled "Left level III" consists of nodular fibrofatty tissue measuring 3x1x1cm. Entire specimen

submitted in cassette E.

Specimen VI labelled "Left level IV" consists of nodular fibrofatty tissue whole measuring 3x2x1cm.One lymph

node identified measuring 1.5cm in greatest dimension. Cut surface shows a small grey white speck measuring

0.1x0.1x0.1cm. Entire specimen submitted in cassests F1 and F2.

Specimen VII labelled "level I B" consists of salivary gland measuring 5x3x1cm. One lymph node identified

measuring 0.9cm in greatest dimension. Representative sections are submitted in cassettes G1 & G2.

**Microscopic Description :**

Sections studied from left tongue shows an infiltrating neoplasm arising from the epithelium with tumor cells

arranged in irregular nests and anastomosing cords .The individual cells have round to ovoid vesicular nucleus

with prominent nucleoli and moderate eosinophilic cytoplasm. Epithelium shows areas of ulceration. The

infiltrative front of the tumor shows broad pushing cords of tumor cells with intervening stroma and few

individual cell clusters. Interface shows patchy lymphoplasmacytic inflammatory infiltrate. Subepithelium shows

keratin pearl formation, areas of haemorrhage. Lymphocytic infiltration also seen into adjacent sublingual

salivary glands. PNI seen. No LVE noted

- All margins sampled are free of tumour, closest being deep inked margin (3mm)

B) Left level I A - 3 lymph nodes -free of tumour (0/3)

C) Left level II A - 10 lymph nodes 0free of tumour (0/10)

D) Left level II B - 4 lymph nodes -free of tumour (0/4)

E) Left level III - 3 lymph nodes -free of tumour (0/3)

F) Left level IV - 1 lymph node shows subcapsular tumor deposit of <2mm and 4 lymph nodes are free of

tumour (1/5). No extranodal extension seen.

G) Level I B - Salivary gland and one lymph node -free of tumour (0/1)

**Impression :**

WLE left lateral tongue + left lymph node dissection:

-Moderately differentiated squamous cell carcinoma.

-Tumour size-2.5x2.2x0.9cm.

-Depth of invasion -1cm

-All sampled margins are free of tumour

-No LVE seen

-WPOI - Score 0

-PNI -Score 1

-LHR -Score 1

-Risk group - intermediate

-One lymph node out of 26( left level IV) separately received lymph nodes and salivary gland tissue show tumor

deposit which measures <2mm (1/26);no ENE seen.

AJCC staging -pT2N1

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| **Date of Admission :**10/02/2021 | **Date of Procedure :**11/02/2021 |

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| **Date of Discharge :**20/02/2021 |

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| **Discharging Status :**FOLLOW UP DISCHARGE SUMMARY |

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| **DIAGNOSIS :** |
| Ca tongue T2NoM0 |

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| **PROCEDURE DONE :** |
| WLE + Left SND(I-IV) + Infra-hyoid flap + Left RAFF raised without cephalic vein (and replaced) under ga on 11-02-2021.(Head and Neck Major Resection+construction for cancer defect Grade II + Neck Dissection ) |

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| **HISTORY :** |
| 42/ M, resident of KANAKKARY PO, noticed ulcer on left lateral border of tongue since 2 months. No h/o bleeding/ trsimus/neck swelling |

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| **PAST HISTORY :** |
| No h/o DM, HTN, DLP, CAD, CVA, Asthma, seizure disorders, thyroid dysfunction No habituation of smoking/ alcohol consumption |

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| **PERSONAL HISTORY :** |
| bowel and bladder- normal |

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| **CLINICAL EXAMINATION :** |
| GC fair vitals fair o/e kps 90 mouth opening good 2x2cm ulcer on left lateral border tongue anteriorly 3cm from tip. posteriorly just reaching BOT, extending into ventral surface. FOM free neck- no palpable nodes |

**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** |
| 12/02/2021 | 11.5 | 35.1 | 243 | 11.35 | 94.8 | 2.8 | 0.0 | - |
| 13/02/2021 | 12.7 | 38.8 | 283 | 14.29 | 88.6 | 6.2 | 0.0 | - |

**Renal Function Test and Serum Electrolytes:**

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| **Date:** | **Urea: mg/dl** | **Creatinine: mg/dl** | **Na+: mEq/L** | **K+: mEq/L** |
| 12/02/2021 | 12.1 | 0.48 | 135.8 | 3.9 |

Date: 13/02/2021

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| RBC-COUNT-Blood : 4.35 M/uL | MCV-Blood : 89.2 fL |

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| MCH-Blood : 29.2 pg | MCHC-Blood : 32.7 g/dl |

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| RDW-Blood : 12.4 % | MPV-Blood : 10.7 fL |

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| MONO -Blood : 4.9 % | BASO-Blood : 0.3 % |

Date: 12/02/2021

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

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| RBC-COUNT-Blood : 4.08 M/uL | MCV-Blood : 86.0 fL |

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| MCH-Blood : 28.2 pg | MCHC-Blood : 32.8 g/dl |

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| RDW-Blood : 12.2 % | MPV-Blood : 10.1 fL |

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| MONO -Blood : 2.3 % | BASO-Blood : 0.1 % |

Date: 10/02/2021

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| Compatibility test; cross match complete (3 tests) : Compatible | Blood typing; ABO and RhD : O Rh D Positive |

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| **COURSE IN THE HOSPITAL AND DISCUSSION :** |
| Patient was admitted with above mentioned complaints. After relevant investigations, patient was taken up for WLE + Left SND(I-IV) + Infra-hyoid flap + Left RAFF raised without cephalic vein (and replaced) under ga on 11-02-2021. His intra and postop period was uneventful. His drains were removed on POD4. He started orally on POD 7 and RT removed on POD8. Sutures and clips taken out on POD8. He is afebrile and stable at the time of discharge. |

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| **OPERATIVE FINDINGS :** |
| WLE + Left SND(I-IV) + Infra-hyoid flap + Left RAFF raised without cephalic vein (and replaced) under ga on 11-02-2021. Findings: 3X2cm upg involving the left lateral border tongue, 3cm away from the tip, lnot crossing midline. FOM/BOT free. Multiple significant nodes noted at level-I to IV. Procedure: Nasotracheal intubation done and patient was taken under ga with sterile and aseptic precautions. Patient positioned, cleaned and draped. Wide Local Excision: Bite block inserted on right side. betadine wash given. 3X2cm upg involving the left lateral border tongue, 3cm away from the tip, lnot crossing midline. FOM/BOT free.. Taking adequate margins wide local excision done. Hemostasis acheived. Defect was repaired with left infra-hyoid flap. Left Selective neck dissection(I to IV): Left Skin crease incision made. Subplatysmal flaps elevated superiorly till angle of mandible, Ipsilateral and contralateral anterior belly of digastric muscle defined. Fibrofatty tissue from the level-Ia taken and sent for hpe. Left Facial artery and common facial vein identified and ligated. Significant 1x1cm peri-facial lymph nodes and level-Ib fibrofatty tissue along with submandibular gland removed in toto and sent for hpe. 6x3cm Infrahyoid flap harvested based on left superior thyroid pedicle. Flap tunneled into the oral cavity and inset done to the tongue defect. Left Sternomastoid retracted laterally ijv, carotids and spinal accessory nerves preserved. Left Level-IIa, IIB, III and IV lymphnodes and fibrofatty tissue removed and sent for hpe seperately. Hemostasis acheived. Valsalva given to check bleeding - no active bleeding seen. 14# romovac drain secured. Z-plasty done for vertical limb of the neck wound Wound closed in layers. |

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| **ADVICE ON DISCHARGE :** |
| keep surgical site clean and dry |

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| **WHEN TO OBTAIN URGENT CARE:** |
| in c/o bleeding, fever, purulent discharge |

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| **DIET RECOMMENDATIONS :** |
| soft diet |

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| **PHYSICAL ACTIVITY :** |
| as tolerated |

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| **DISCHARGE MEDICATION :** |
| \*All current medication have been reviewed and reconciled into the medication list. T.Ciplox 500 mg 1-0-1 x 7 days T.Pan 40 mg 1-0-0 x 7 days T.PCM 650mg 1-1-1 x 7 days Chlorhexidine gargle 10 ml 1-1-1-1 x 7 days & after every meal |

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| **HEAD AND NECK - TUMOUR BOARD** |

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|  | **TB Date:**  10/02/2021 |

**Descriptive History and Examination:**

42/M, resident of KANAKKARY PO, noticed ulcer on left lateral border of tongue o/e: kps 90 mouth opening good 2x2cm ulcer on left lat border tongue anteriorly 3cm from tip. posteriorly just reaching BOT, extending into ventral surface. FOM free. neck- no palpable nodes

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| |  | | --- | | **MRI:**  MRI head and neck: (02/02/2021): An irregularly marginated partially we" defined lesion measuring 3.3 x 2.7 x 0.9 cm is seen involving the left lateral aspect of the tongue. This lesion is T1Wand T2Wiso to hypointense with moderate diffusion restriction and STIR hyperintensity. Post contrast sequences show mildly heterogeneous enhancement of the lesion with few suspicious areas of necrosis. Small subtle areas of blooming appreciated in the MERGE sequences which may be related to recent procedure. This lesion is seen to involve the anterior 2/3rd of the tongue. In its lateral aspect, the lesion is seen to be in contact with the inner aspect of the mandibular alveolus of the left side molars. No obvious marrow signal alteration is appreciated and the correlative CT cuts taken did not show any obvious erosions in this region. Posteriorly, the lesion is seen to reach till just adjacent to the level of the retromolar trigone, however no obvious extension into the same is appreciated. In its medial aspect, the lesion is mostly confined to the lateral aspect of the transverse muscle and hyoglossus muscle with anterior extension to involve the sublingual gland with which the fat planes are indistinct. The lesion is seen to be confined to the left side at this level with no obvious extension to the midline. However, in its anterioinferior most aspect of the tongue, there is extension till the midline with minimal extension across the midline to the right side. These areas show subtle restricted diffusion and very minimal enhancement? significance/ ? edema related. Multiple subcentimetric Iymphnodes measuring 6 to 7 mm in short axis diameter noted in bilateral level 1b, 2, 3 nodal stations. Impression: Irregularly marginated partially well defined lesion showing diffusion restriction and heterogeneous post contrast enhancement involving the left lateral aspect of the tongue as described. Suggested HPE correlation . ? Subcentimetric bilateralleveI1b,2,3 nodes [6-7mm in s.a.d] CT chest (02/02/2021): NAD | |  |  | |  |  | |
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| |  |  |  |  | | --- | --- | --- | --- | | **Primary:**  Biopsy: MDSCC   |  |  | | --- | --- | | **Descriptive Plan:**  imp: Ca tongue T2nomx scopy-nad CT- ipsilateral subcentimetric nodes plan:WLE+I/L ND+SCIP flap WLE + Left SND(I-IV) + Infra-hyoid flap + Left RAFF raised without cephalic vein (and replaced) under ga on 11-02-2021. | **Histopathology Descriptive Plan:**  WLE left lateral tongue + left lymph node dissection: -Moderately differentiated squamous cell carcinoma. -Tumour size-2.5x2.2x0.9cm. -Depth of invasion -1cm -All sampled margins are free of tumour -No LVE seen -WPOI - Score 0 -PNI -Score 1 -LHR -Score 1 -Risk group - intermediate -One lymph node out of 26( left level IV) separately received lymph nodes and salivary gland tissue show tumor deposit which measures <2mm (1/26);no ENE seen. AJCC staging -pT2N1 (level IV) Plan: Adjuvant RT |   **Progress Notes**  **Date : 03/02/2021**  **ProgressNotes :**  42/ M,  noticed ulcer on left lateral border of tongue followingdental extraction 5 months back  history of left earache since 7 months  o/e: 2x2cm ulcer on left lat border tongue anteriorly 3cm from tip. posteriorly just reaching BOT, extending  into ventral surface. FOM free.  neck- no palpable nodes  outside MRI HN:report scanned  CT Chest:  Biopsy: MDSCC  Plan: WLE + ND +SCIP flap [to avoid hair]  reluctant for surgery  explained regarding need for surgery as optimal treatment, requirement for free flap  Scopy to be done  **Progress Notes**  **Date : 20/05/2022**  **ProgressNotes :**  Carcinoma Left Lateral Border Tongue pT2N1  S/P WLE + Left SND (I-IV) + Infra-hyoid flap + Left RAFF raised without cephalic vein (and replaced) under  GA on 11-02-2021.  Completed Adjuvant external beam radiation therapy RT Started on 22/03/2021 RT Completed on 07/05/2021  Treatment breaks- 5 days due to Grade III mucositis tongue Total Dose: 6000 cGy in 30 fractions  O/E:locoregional -- NAD  Patient wants to go abroad for 1 year  Adv:  Neck and shoulder exercisese  Review earlier SOS  **Speciality :** RadiationOncology  **D/O Commencement of RT** 22/03/2021 **D/O Completion of RT** 07/05/2021  **FINAL DIAGNOSIS, STAGE AND HISTOLOGY**  Carcinoma Left Lateral Border Tongue  pT2N1 cM0  S/P WLE + Left SND (I-IV) + Infra-hyoid flap + Left RAFF raised without cephalic vein (and replaced) under  GA on 11-02-2021.  Completed Adjuvant external beam radiation therapy  **CLINICAL HISTORY AND PHYSICAL FINDINGS**  42 year old gentleman, with no known co-morbidities  No history of smoking/alcohol intake  He was evaluated for an ulcer on left lateral border of tongue of 2 month duration. No h/o bleeding/ trismus/neck  swelling  MRI Head and Neck done elsewhere (2/2/2021):  - Irregularly marginated partially well defined lesion showing diffusion restriction and heterogeneous post  contrast enhancement involving the left lateral aspect of the tongue.  - Subcentimetric bilateral level I-b,2,3 nodes [6-7mm in s.a.d]  CT Chest done elsewhere (2/2/2021): No evidence of Lung metastases.  He presented to HNS OPD AIMS for further evaluation and management.  Clinical examination:  KPS 90  mouth opening good  2x2cm ulcer on left lateral border tongue anteriorly 3cm from tip. posteriorly just reaching BOT, extending into  ventral surface. FOM free  neck- no palpable nodes  His case was discussed in HNS Tumour board and planned for  surgery.  Underwent WLE + Left SND(I-IV) + Infra-hyoid flap + Left RAFF raised without cephalic vein (and replaced)  under GA on 11-02-2021.  Per op Findings: 3X2cm upg involving the left lateral border tongue, 3cm away from the tip, lnot crossing  midline. FOM/BOT free. Multiple significant nodes noted at level-I to IV.  HPR (17/02/2021) WLE left lateral tongue + left lymph node dissection:  - Moderately differentiated squamous cell carcinoma.  - Tumour size-2.5 x 2.2 x 0.9 cm.  - Depth of invasion: 1 cm  - All sampled margins are free of tumour  - No LVE seen  - WPOI - Score 0  - PNI -Score 1  - LHR -Score 1  - Risk group - intermediate  - One lymph node out of 26( left level IV) separately received lymph nodes and salivary gland tissue show tumor  deposit which measures < 2 mm (1/26); no ENE seen.  - AJCC staging: pT2N1  The case was discussed in HNS Tumour board and was decided for Adjuvant Radiation.  He was then referred to RT OPD.  Clinical examination- Wound healed well. No palpable neck nodes.  The diagnosis, prognosis, intent of treatment , need for adjuvant radiation , treatment techniques and possible  side effects has been explained to the patient and bystanders and they opted for IGRT.  Pre RT dental prophylaxis done.  **INVESTIGATIONS :**  **Haemogram:**  **Date: Hb: g/dl PCV: % PLT: TC: DC: N % L:% E: % ESR:**  **ku/ml ku/ml mm/1st hr**  30/03/2021 13.1 38.7 314 5.56 67.3 21.9 2.0 -  19/04/2021 13.6 40.8 354 6.82 77.1 7.9 3.7 -  04/05/2021 12.4 36.8 290 7.50 94.9 3.3 0.0 -  **Renal Function Test and Serum Electrolytes:**  **Date: Urea: mg/dl Creatinine: mg/dl Na+: mEq/L K+: mEq/L**  30/03/2021 - 0.80 - -  19/04/2021 - 0.78 136.8 4.0  04/05/2021 - 0.78 137.7 4.0  Date: 04/05/2021  RBC-COUNT-Blood : 4.45 M/uL MCV-Blood : 82.7 fL  MCH-Blood : 27.9 pg MCHC-Blood : 33.7 g/dl  RDW-Blood : 12.0 % MPV-Blood : 8.9 fL  MONO -Blood : 1.7 % BASO-Blood : 0.1 %  Date: 19/04/2021  RBC-COUNT-Blood : 4.70 M/uL MCV-Blood : 86.8 fL  MCH-Blood : 28.9 pg MCHC-Blood : 33.3 g/dl  RDW-Blood : 11.9 % MPV-Blood : 9.5 fL  MONO -Blood : 10.4 % BASO-Blood : 0.9 %  Date: 30/03/2021  RBC-COUNT-Blood : 4.57 M/uL MCV-Blood : 84.7 fL  MCH-Blood : 28.7 pg MCHC-Blood : 33.9 g/dl  RDW-Blood : 12.7 % MPV-Blood : 9.4 fL  MONO -Blood : 8.1 % BASO-Blood : 0.7 %  **HISTOPATHOLOGY REPORTS**  HPR (17/02/2021) WLE left lateral tongue + left lymph node dissection:  - Moderately differentiated squamous cell carcinoma.  - Tumour size-2.5 x 2.2 x 0.9 cm.  - Depth of invasion: 1 cm  - All sampled margins are free of tumour  - No LVE seen  - WPOI - Score 0  - PNI -Score 1  - LHR -Score 1  - Risk group - intermediate  - One lymph node out of 26( left level IV) separately received lymph nodes and salivary gland tissue show tumor  deposit which measures < 2 mm (1/26); no ENE seen.  AJCC staging: pT2N1  Treatment Given:  **RADIATION DETAILS :**  Intent: Curative [Adjuvant Radiation therapy]  Technique: IGRT  Site of Disease: Ca Left Lateral Border Tongue  Cat Scan Simulation on 15/03/2021  Complex Computerised Treatment Planning on 22/03/2021  RT Started on 22/03/2021  RT Completed on 07/05/2021  Treatment breaks- 5 days due to Grade III mucositis tongue  Total Dose: 6000 cGy in 30 fractions  **Primary Tumour And Drainage Area :**  Site: PTV 60 Gy : Tongue Bed +surgical bed+ B/L Level I, II , III + Left sided IV, V  Energy: 6 MV Photons  Dose: 6000 cGy in 30 fractions  Schedule: 200 cGy per fraction and 5 fractions a week  Dose prescribed to 100% isodose line.  Site: PTV 54 Gy: Right Level IV, V  Energy: 6 MV Photons  Dose: 5400 cGy in 30 fractions  Schedule: 180 cGy per fraction and 5 fractions a week  Dose prescribed to 100% isodose line.  **TREATMENT COURSE :**  a 42 year old gentleman, who was diagnosed as a case of carcinoma left lateral border  tongue, pT2N1. He completed full course of post operative adjuvant radiation therapy. Due to Grade III  mucositis on left side tongue there was treatment break for 5 days. During the course of treatment in the last 10  days he was started on morphine for pain control. On completion of treatment he has Grade I skin reaction and  Grade III mucositis [Left lat border tongue ].  **ADVICES AT DISCHARGE, MEDICATIONS AND FURTHER PLAN**  1. Review after 2 weeks in RT OPD.  2. Review after 6 weeks in HNS-RT Combined Follow Up Clinic for evaluation of Primary Disease, Neck  Nodes.  3. Review every month in RT OPD for one year and then as advised.  Investigations:  1. CXR PA View, CBC, RFT and Liver Enzymes [SGOT, SGPT and Alkaline Phosphatase] 4- 6 weeks post RT  and then as advised by the Physician [CXR every 6 months].  2. TFT [T3, T4, TSH] every 6 months routinely to rule out post RT hypothyroidism.  Oral and Skin Care:  1. Mix a pinch of Soda Bicarbonate powder and one table spoon of common salt in a liter of water and use as  mouth wash every 4 to 6 hours.  2. Skin care: Avoid applying oil and washing with soap. Gentle splashing of water followed by mopping with  towel. Normal daily bath can be resumed after 3 weeks of completion of RT. Apply ointments or creams only as  per Doctors' advice.  3. Silver Sulfadiazine Cream for Local Application TID for wounds [for healing].  Specific:  1. High calorie feeds: 3500 calorie and 120 gm protein with mineral and vitamin supplementation in 2.5 liters of  liquid diet. |  | |