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| **Radiology Report** |

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| |  | | --- | | **Study Done:**    **MDCT NECK WITH CHEST - CONTRAST**      Post RT changes seen in the neck.  Diffuse irregular thickening of right cheek noted with lesion extending  into the superior and inferior buccogingival sulcus.Temporalis muscles, lateral pterygoid and masseter muscles appear bulky, diffusely enhancing with poor fat plane with the mass in the buccal space.  Enlarged node seen in level Ia and right level II (8 x 8 mm).  Supra glottis, glottis and sub glottis appear normal.  Thyroid gland appears normal. | |  | |
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| |  | | --- | | **Impression:**    ***Known case of carcinoma buccal mucosa T4N1 M0. Post EBRT.***   * **Residual thickening of right cheek with extensions as described.** | |

**SURGICAL PATHOLOGY REPORT**

**Date of sample collection :** 05/07/2016

**Received on :** 05/07/2016

**Reported Date :** 12/07/2016

**Gross Description :**

Received in formalin are 14 specimens.

The Ist specimen labelled "WLE specimen segmental mandibulectomy + infrastructure maxillectomy + right

buccal mucosa and cheek skin", consists of mandible measuring 6x3x1.5cm. harbouring 2 teeth. Maxilla

measuring 4.5x4.5x3.5cm. Attached skin with soft tissue and mucosa. RMT (right) shows an ulcerative lesion

involving superior and inferior GB sulcus extending from mandible to maxilla. Lesion measures 2.7x1.6x3cm.

Lesion is 1cm from the anterior mucosal margin, 0.8cm from the anterior soft tissue margin, 0.6cm from the

lateral cheek skin margin ,0.2cm from the posterior soft tissue margin on lateral aspect and 1.6cm from the

posterior soft tissue margin on medial aspect. Tumor abuts the medial soft tissue margin and is 1.8cm from the

superior soft tissue margin, 3.6cm from the medial inferior soft tissue margin, 1.1cm from anterior bony margin

of mandible, 2.5cm from the posterior bony margin of mandible and 2.5cm from the anterior bony margin of

maxilla . Representative sections are submitted as follows:

A1 - Anterior mucosal and soft tissue margin

A2 - Posterior mucosal and soft tissue margin

A3 - Skin with lesion

A4 - Medial margin with lesion

A5 - Posterior medial soft tissue margin

A6 - Superior soft tissue shaved margin

A7 - Infero medial soft tissue margin shaved

A8 & A9 - Lesion proper.

Specimen II labelled " Soft palate margin", consists of mucosa covered tissue with fibrofatty tissue measuring

2.5x1.4x1cm. Entire specimen submitted in cassette B.

Specimen III labelled"Additional lateral soft tissue and bone margin",m consists of bone with soft tissue

measuring 3x2.5x1.5cm. (Kept in DC)

Specimen IV labelled "Additional tonsillar margin", consists of grey white tissue bits measuring 0.6x0.4x0.5cm.

Entire specimen submitted in cassette D.

Specimen V labelled "Additional / tonsillo lingual sulcus margin", consists of grey white tissue bits measuring

0.6x0.5x0.5cm. Entire specimen submitted in cassette E.

specimen VI labelled "Additional superior margin", consists of grey white to grey brown tissue bits measuring

2.5x1x1cm. Entire specimen submitted in casssette F.

Specimen VII labelled "Tissue adjacent to skull base", consists of mucosa covered tissue bit measuring

1.5x21.5x0.5cm. Entire specimen submitted in cassette G.

Specimen VIII labelled "Pterygoid muscle", consists of grey brown tissue bit measuring 3x1.5x0.5cm. Entire

specimen submitted in cassettes H1 & H2.

Specimen IX labelled " right level I b", consists of fibrofatty tissue measuring 4.5x3x1.5cm. Salivary gland

identified 2 lymph nodes identified. Representative sections are submitted as follows:

J1 & J2 - Salivary gland

J3 to J5 - Fibrofatty tissue

J6 - 2 lymph nodes.

Specimen X labelled "right level II A , consists of fibrofatty tissue measuring 5.5x5x2cm. 4 lymph nodes

identified. Representative sections are submitted in cassettes K1 to K11.

Specimen XI labelled "Right level IIb", consists of nodular fibrofatty tissue measuring 4x2.5x1cm. No lymph

nodes identified. Entire specimen submitted in cassettes L1 to L4.

Specimen XII labelled "right level III", consists of fibrofatty tissue measuring 3.5x3x1.5cm. 5 lymph nodes

identified , largest measuring 1cm in greatest dimension. Entire specimen submitted in cassettes M1 to M3.

Specimen XIII labelled "Right level IV", consists of fibrofatty tissue measuring 2.5x3x1.6cm. 8 lymph nodes

identified. Entire specimen submitted in cassettes N1 to N4.

Specimen XIV labelled Right level I A", consists of lymph nodes mesuring 1.8x2x1cm. 2 lymph nodes

identified. Entire specimen submitted in cassettes P1 to P3.

**Microscopic Description :**

Sections from right buccal mucosa shows an ulcerated neoplasm arising in a dysplastic mucosa composed of

moderately pleomorphic squamous cells arranged in nests, lobules and anastomosing cords. Keratin pearl

formation seen with brisk mitosis. Tumour cells are seen infiltrating into the underlying connective tissue

stroma. Tumour interface shows moderate lymphoplasmacytic infiltrate. Perineural invasion seen. No

lymphovascular emboli seen.

**Diagnosis :**

WLE specimen - segmental mandibulectomy + infrastructure maxillectomy + right buccal mucosa + cheek skin.

Tumor type - Well differentiated squamous cell carcinoma right buccal mucosa.

Tumour dimensions- 2.7x1.6x3cm

Tumour thickness : 16 mm

Depth of invasion : 7mm

Invasive front : Cohesive

WPO I : Pattern 3 (score 0)

LHR : Score 1+

Risk : Intermediate

Perineural invasion : Seen (>1 mm)

Vascular invasion : absent

Bony invasion :absent

Margin clearance

Anterior mucosal : 8mm

Posterior mucosal :2mm

Skin - Free (2mm)

Medial margin - involved (1mm)

Posteromedial soft tissue margin - 16mm

Superior soft tissue margin - 18mm

Inferior medial soft tissue margin - 36mm

Bony margins of mandible and maxilla - free

Additional margins:

Soft palate margin - Free

Lateral soft tissue and bone margin - free

Tonsillar margin - Free

Tonsillolingual sulcus margin - free

Superior margin - free

Skull base mucosa - involved

Pterygoid muscle - involved.

Lymph nodes :

Right cervical

Level IA - 1/1 lymph node involved

- ECS - seen

- Metastatic focus measures 8 mm

Level IB - Two lymph nodes - free, salivary gland - free

Level IIA - Five lymph nodes - free

Level IIB - Two lymph nodes - free

Level III -Six lymph nodes - free

Level IV - Four lymph nodes - free

pT4bN1

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| **Date of Admission :**27/06/2016 | **Date of Procedure :**04/07/2016 |

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| **Date of Discharge :**14/07/2016 |

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

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| **DIAGNOSIS :** |
| Diagnosis: Residual carcinoma buccal mucosa s/p radiotherapy |

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| **PROCEDURE DONE :** |
| 4.7.2016 Surgery: WLE + segmental mandibulectomy + partial maxillectomy right SND + ALT flap + trachesotomy under GA re exploration done under GA on 06/7/16 |

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| **HISTORY :** |
| case of Carcinoma Buccal Mucosa cT4N1M0 Completed Radical External beam Radiation therapy on: 05.05.2016 Total dose:4500cGy in 20 fractions+1500cGy in 6 fractions+500cGy in 2 fractions boost dose(Tumour+level II Node) Treatment breaks - 0 days . pre treatment MRI which showed a 5 x 3.5 x 2.5 cm involving soft tissues of right cheek. involving buccinater, masticator space, temporalis, masseter and pterygoid. medially involving posterior maxillary sinus. no defenite erosion of maxilla and mandible. No palpable lymphadenopathy. came with h/o oral bleed since 1 day. h/o DM/HTN not on tratement. |

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| **CLINICAL EXAMINATION :** |
| o/e: severe trismus (1cm) examined with scope - right RMT clots +++ no obvious lesion seen . on manipulation of clots active bleed+. packing done. |

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| 27/06/2016 Study Done: MDCT NECK WITH CHEST - CONTRAST Post RT changes seen in the neck. Diffuse irregular thickening of right cheek noted with lesion extending into the superior and inferior buccogingival sulcus.Temporalis muscles, lateral pterygoid and masseter muscles appear bulky, diffusely enhancing with poor fat plane with the mass in the buccal space. Enlarged node seen in level Ia and right level II (8 x 8 mm). Supra glottis, glottis and sub glottis appear normal. Thyroid gland appears normal. 　 Impression: Known case of carcinoma buccal mucosa T4N1 M0. Post EBRT. \* Residual thickening of right cheek with extensions as described. |

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| **COURSE IN THE HOSPITAL AND DISCUSSION :** |
| case of Carcinoma Buccal Mucosa cT4N1M0 Completed Radical External beam Radiation therapy on: 05.05.2016 Total dose:4500cGy in 20 fractions+1500cGy in 6 fractions+500cGy in 2 fractions boost dose(Tumour+level II Node) Treatment breaks - 0 days . pre treatment MRI which showed a 5 x 3.5 x 2.5 cm involving soft tissues of right cheek. involving buccinater, masticator space, temporalis, masseter and pterygoid. medially involving posterior maxillary sinus. no defenite erosion of maxilla and mandible. No palpable lymphadenopathy. came with h/o oral bleed since 1 day. h/o DM/HTN not on tratement. case discussed in tumour board. CECT HN shows residual buccal mucosal disease. planned for WLE + segmental mandibulectomy + partial maxillectomy right SND + ALT flap + trachesotomy. the same done under GA on 4.7.2016 . re exploration done on POD 2 . patient recovered well. post op MI . cardiology consult was saught and echo done. strated on mediactions. patient taking oral feeds. fit for dischrage |

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| **OPERATIVE FINDINGS :** |
| 4.7.2016 Surgery: WLE + segmental mandibulectomy + partial maxillectomy right SND + ALT flap + trachesotomy under GA Findings: Total trismus.No mouth opening. skin for about 2 x 1 cms puckered in the cheek. NEcrotic ?growth in the RMT between the ascending ramus and the maxilla. Node in level Ia. Under GA Nasotracheal intubation cheek incision and neck incision. Cheek and neck flap eleavted. Lip split in the angle. Mandible anterior cut made near the lateral incisor. Ascending ramus exposed. Infra structure maxillectomy done. Specimen delivered intoto. Infra temporal fossa cleared and temporalis included in the specimen. Level I-IV ND done. Left thigh ALT : 10 x 6 cms. Seperate VL muscle included. Defect: Skin and corresponding buccal mucosa. Dead space in the ITF. Flap inset with 3-0 vicryl, 3-0 pds and nylon. Anastamosis: Artery to superior thyroid artery using 9-0. common VC to the EJV using 9-0. Thigh closed primarily. Neck 14 Fr drain. Closed with 3-0 vicryl and 4-0 nylon. re exploration done under GA on 06/7/16- no active bleeding. clots evacuated from beneath ALT flap over cheek |

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| **ADVICE ON DISCHARGE :** |
| review to head and neck OPD 22.7.16 oral care |

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

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| **PHYSICAL ACTIVITY :** |
| moderate |

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| **DISCHARGE MEDICATION :** |
| tab concor 5mg 1-0-0 tab ecosprin 150mg 0-1-0 tab sorbitrate 10mg 1-1-1 (tab sorbitrate 5mg sublingual sos) tab atorva 10mg 0-0-1 tab telma 20mg 1-0-0 |

**Tumour Board Discussion**

**Date of tumor board discussion :** 29/06/2016

**Relevant clinical details :**

case of Carcinoma Buccal Mucosa cT4N1M0 Completed Radical External beam Radiation therapy on:

05.05.2016 Total dose:4500cGy in 20 fractions+1500cGy in 6 fractions+500cGy in 2 fractions boost

dose(Tumour+level II Node) Treatment breaks - 0 days . pre treatment MRI which showed a 5 x 3.5 x 2.5 cm

involving soft tissues of right cheek. involving buccinater, masticator space, temporalis, masseter and pterygoid.

medially involving posterior maxillary sinus. no defenite erosion of maxilla and mandible. No palpable

lymphadenopathy. came with h/o oral bleed since 1 day. h/o DM/HTN not on tratement. o/e: severe trismus

(1cm) examined with scope - right RMT clots +++ no obvious lesion seen . on manipulation of clots active

bleed+. packing done.

**Surgery / other procedures :**

CT head and neck: Diffuse irregular thickening of right cheek noted with lesion extending into the superior and

inferior buccogingival sulcus.Temporalis muscles, lateral pterygoid and masseter muscles appear bulky,

diffusely enhancing with poor fat plane with the mass in the buccal space.

**Agreed Plan of management :**

Two options:

1. Curative intent: WLE with maxillectomy+mandibulectomy+ITF clearance and flap reconstruction. Extensive

disease with low likelihood of negative margins. Morbid surgery with difficult reconstruction

2. Palliative intent: Ext carotid ligation for bleeding

To discuss both with the patient and for patient/relatives to decide

**Tumour Board Discussion**

**Relevant clinical details :**

Residual carcinoma buccal mucosa s/p radiotherapy S/P Surgery: WLE + segmental mandibulectomy + partial

maxillectomy right SND + ALT flap + trachesotomy under GA on 4.7.2016 re exploration done under GA on

06/7/16 First post op visit - came for review as advised Taking oral liquids Has difficulty in swallowing -

minimal pain O/E: Minimal flap dehiscense intra-orally

**Agreed Plan of management :**

RE-RADIATION

**Progress Notes**

**Date : 16/03/2016**

**ProgressNotes :**

ca right cheek

working in construction field

uses pan parag

stopped 1 year back

now presented with right cheek.

HPE - SCC

MRI - 5 x 3.5 x 2.5 cm involving soft tissues of right cheek. involving buccinater, masticator space, temporalis,

masseter and pterygoid. medially involving posterior maxillary sinus. no defenite erosion of maxilla and

mandible.

no palpable lymphadenopathy.

**Operation notes**

**Date : 05/07/2016**

**ProgressNotes :**

4.7.2016

11 OT

Diagnosis: Residual carcinoma buccal mucosa s/p radiotherapy

Surgery: WLE + segmental mandibulectomy + partial maxillectomy right SND + ALT flap + trachesotomy

under GA

Findings:

Total trismus.No mouth opening. skin for about 2 x 1 cms puckered in the cheek. NEcrotic ?growth in the

RMT between the ascending ramus and the maxilla. Node in level Ia.

Under GA

Nasotracheal intubation

cheek incision and neck incision. Cheek and neck flap eleavted. Lip split in the angle. Mandible anterior cut

made near the lateral incisor. Ascending ramus exposed. Infra structure maxillectomy done. Specimen

delivered intoto. Infra temporal fossa cleared and temporalis included in the specimen. Level I-IV ND done.

Left thigh ALT : 10 x 6 cms. Seperate VL muscle included.

Defect: Skin and corresponding buccal mucosa. Dead space in the ITF.

Flap inset with 3-0 vicryl, 3-0 pds and nylon.

Anastamosis: Artery to superior thyroid artery using 9-0. common VC to the EJV using 9-0.

Thigh closed primarily. Neck 14 Fr drain. Closed with 3-0 vicryl and 4-0 nylon.

**Progress Notes**

**Date : 15/11/2016**

**ProgressNotes :**

Carcinoma Buccal Mucosa(right)Recurrence s/p radiotherapy to right buccal mucosa 65 Gy in 28 fractions

completed on 5/5/2016. S/P WLE + segmental mandibulectomy + partial maxillectomy right SND + ALT flap

+ tracheostomy under GA on 04.07.2016. developed recurrence in infra temporal fossa, pterygo palatine fossa

through foramen ovale and rotundum to middle cranial fossa. hence reirradiated 10# completed in october

2016. now with skin lesions. o/e: multiple skin nodules inferior aspect of ALT flap. trismus+. post RT

dermatitis +

advice: pain and palliative medicine

consult.

**Speciality :** RadiationOncology

**D/O Commencement of RT** 28/03/2016 **D/O Completion of RT** 05/05/2016

**FINAL DIAGNOSIS, STAGE AND HISTOLOGY**

Carcinoma Buccal Mucosa

cT4N1M0

Squamous Cell Carcinoma

Completed Radical External beam Radiation therapy

**CLINICAL HISTORY AND PHYSICAL FINDINGS**

Referred by Dr.Mohanan Nair from Krishna hospital.

Mr. R Dinesh, 54 year old gentleman, working in construction field, presented with complaints of a swelling

right cheek. He was evlauted at near by local hospital with MRI which showed a 5 x 3.5 x 2.5 cm involving soft

tissues of right cheek. involving buccinater, masticator space, temporalis, masseter and pterygoid. medially

involving posterior maxillary sinus. no defenite erosion of maxilla and mandible. No palpable lymphadenopathy.

Histopathology reported as Squamous Cell Carcinoma.

He was referred to here for further management and was planned for External Beam Radiation therapy.

**INVESTIGATIONS :**

**HISTOPATHOLOGY REPORTS**

Histopathology reported as Squamous Cell Carcinoma

Treatment Given:

**RADIATION DETAILS :**

Intent: Curative

Cat scan simulation:24.03.2016

RT started on: 28.03.2016

RT completed on: 05.05.2016

Total dose:4500cGy in 20 fractions+1500cGy in 6

fractions+500cGy in 2 fractions boost dose

Treatment breaks - 0 days

**Primary Tumour And Drainage Area :**

Site:Tumour+Margin

Portals: RAO340,RPO,RAO 300

Energy: 6 MV,15 MV Photons

Dose: 4500 cGy in 20 fractions

Schedule: 225 cGy per fraction and 5 fractions per week

Dose prescribed to 100% isodose line

**Boost Fields :**

Boost dose:Site: CTV 60/26(Tumour+level II Node)

Portals:RAO,RPO,RAO

Energy: 6 MV,15 MV Photons

Dose: 1500 cGy in 6 fractions

Schedule: 250 cGy per fraction and 5 fractions per week

Dose prescribed to 100% isodose line

Boost dose:

Site: CTV Primary [60-65]

Portals: AP, RPO

Energy: 6 MV and 15 MV Photons

Dose: 500 cGy in 2 fractions

Schedule: 250 cGy per fraction and 5 fractions per week

Dose prescribed to 100% isodose line

**TREATMENT COURSE :**

54 year old gentleman, diagnosed as a case of Carcinoma Buccal Mucosa, completed planned

course of Adjuvant Radiation therapy well without interruptions. He had grade II skin , Grade II mucosal

reactions on completion .

**Progress Notes**

**Date : 23/11/2016**

**ProgressNotes :**

Carcinoma Buccal Mucosa(right)Recurrence s/p radiotherapy to right buccal mucosa 65 Gy in 28 fractions

completed on 5/5/2016. S/P WLE + segmental mandibulectomy + partial maxillectomy right SND + ALT flap

+ tracheostomy under GA on 04.07.2016 .had reirradiation -Tomotherapy - 4000 cgy in 10 # last on 4/10/16

Now referred for palliative Chemo

Not able to take feeds since today morning.Has not passed stools for 7 days despite being on laxatives.On oral

morphine

O/E - BS -

Purulent discharge from right eye

ADV

INJ EMESET 8MG I.V STAT

INJ METHOTREXATE 50 MG I.M STAT

PRACTOCLYSIS ENEMA STAT

OPTHALMOLOGY CONSULTATION

REVIEW AFTER 1 WEEK - 30/11/16 WITH CBC, S CREAT