Unresectable Mouth Floor Cancer with Skin Carcinomatosis post Radiotherapy with Disease Progression post Salvage Surgery: the Role and Treatment Consideration of Post-Operative Re-Radiotherapy

Case Number: RT2009 – 63-2(M)

Potential Audiences: Intent Doctor, Oncology Special Nurse, Resident Doctor

Purpose: to present a case of initial unresectable mouth floor cancer with skin carcinomatosis with bone invasion, post RT with tumor regression then re-progression, post salvage surgery, with pT4aN1; to discuss the role and treatment consideration of post-op re-radiotherapy with chemotherapy

Scenario: You are radiotherapy (RT) Intent Doctor/Special Nurse/Resident Doctor, and you are assigned to evaluate the following patient before visiting of your RT attending physician. Please review the following description carefully; your RT attending physician will visit this patient later and discuss with you after your review.

Case Presentation:

This 54–year-old male patient, OO, was re-referred to us for post-op radiotherapy assessment of ‘Mouth floor cancer with skin carcinomatosis, unresectable cT4bN2cM0, stage IVB (2008/08), post RT (7540 cGy), with disease regression then disease re-progression, post salvage radical surgery and bilateral neck dissection (2009/03), rypT4aN1M0, ryp-stage IV A (2009/03, AJCC 2006)’.

S:
1. In 2008/01-2008/02, mouth floor cancer was diagnosed and surveyed at other hospital. No any treatment was done at that time.
2. In 2008/08, he was sent to our RT OPD for further assessment. We suggested and arranged CCRT for this patient, but he refused CCRT and lost to follow-up thereafter.
3. In 2008/10, he was sent to our hospital for further assessment of oral cancer with frequent tumor bleeding. Neck CT reported unresectable mouth floor tumor with size more than 10 cm with mandible destruction, cT4bN2c(bilateral neck level II-IV LNs)M0. RT with 7540 cGy was given thereafter. After RT, the tumor showed regression for months, but the tumor showed re-progression in 2009/02.
4. In 2009/03, salvage radical surgery and bilateral neck dissection were done. Pathology reported ypT4aN1 classification. The surgical margin cannot be determinate.
5. On 2009/03/19, you visit this patient in the ward.

Histories:
1. NDKA; no major medical disease history
2. <<RT dose: 7540 cGy in 40 fractions to the mouth floor tumor on 2009/01/02>>

Review of systems: no more surgical pain; improved upper abdominal discomfort that induced from the upper GI bleeding

O:
1. General Condition: ECOG: 4, lying on bed, weakness, speech: none due to post op organ defect; on NG tube with NG feeding; still mild cancer cachexia status
2. Physical Examinations:
   (1). HEENT & SCF: just post major surgery with massive flap in place; the oral tongue
is protruding over the oral cavity with dryness in appearance.
(2). CHE: neg.; (3). ABD: no tenderness; (4). Back & Spine: no knocking pain
(5). Extremities: three flap donor sites over the limbs with good healing; no edema
(6). Others: neg.

3. ***Pathology in 2009/03, radical surgery with bilateral neck dissection: squamous cell carcinoma, moderately differentiated, of the mouth floor, tumor size of 8.5x4x3.2 cm, with involvement of bilateral lower gingiva, mandible, lower lip, and chin skin tissue; Lns (left level V: 0/6; right level IV: 0/2; right level V: 1/6); ypT4a(mandible and chin skin)N1(1/14, < 3 cm)Mx (AJCC, 2006)

4. Images:
(1). Neck CT in 2008/10: huge mouth floor tumor with size more than 10 cm with destruction of the mandible with bilateral neck Lns, unresectable disease status, cT4bN2cMx.; with multiple skin carcinomatosis
(2). ABD sono and CXR in 2009/02: all neg.

5. Others: neg.
Questions & Discussions:
(Please answer the following questions commented from your RT attending physician.)

Q1: What are your findings/interpretations for the above key image(s)?

Q2: What is your clinical cancer stage, according to the AJCC 2006, for this case?

Q3: What is your pathologic cancer stage, according to the AJCC 2006, for this case?

Q4: What are your Oncology Diagnosis / Assessments for this case?

Q5: What is your Oncology Plan for this case?

Q6: What is your Radiotherapy Plan for this case?
   (Please reply with the following form: Indication/Contraindication, Goal, Target & Volume, Technique, and Dose & Fractionation.)
Questions & Discussions: (with potential answers)
(Please answer the following questions commented from your RT attending physician.)

Q1: What are your findings/interpretations for the above key image(s)?
A1: As described in the last attached page.

Q2: What is your clinical cancer stage, according to the AJCC 2006, for this case?
A2: unresectable cT4bN2cM0, stage IVB (2008/08, AJCC 2006)

Q3: What is your pathologic cancer stage, according to the AJCC 2006, for this case?
A3: rypT4a(mandible and chin skin)N1(1/14, positive on the right level V)M0, ryp-stage IVA (2009/03, AJCC 2006).

Q4: What are your Oncology Diagnosis/Assessments for this case?
A4: Oncology Diagnosis: Squamous cell carcinoma, moderately differentiated, of the mouth floor, unresectable cT4bN2cM0, stage IVB (2008/08, AJCC 2006), with multiple skin carcinomatosis, post RT (2009/01, 7540 cGy), with tumor regression then tumor re-progression, post salvage radical surgery and bilateral neck dissection (2009/03), rypT4a(mandible and chin skin)N1(1/14, positive on the right level V)M0, ryp-stage IVA (2009/03, AJCC 2006), with surgical margin cannot be determinate

Q5: What is your Oncology Plan for this case?
A5: Suggest:
(1). agree the consultation of Hema-Onc section for assessment of post-op CCRT
(2). I will arrange 3DCT for preparing post-op IMRT.

Q6: What is your Radiotherapy Plan for this case?
(Please reply with the following form: Indication/Contraindication, Goal, Target & Volume, Technique, and Dose & Fractionation.)
A6: RT Plan may be designed as the following one:
(1). Indication: post salvage surgery with rypT4aN1 with margin un-determinate
(2). Goal: prolong survival to potentially curative in post-op CCRT setting
(3). Target & Volume: surgical bed and LN drainage basin
(4). Technique: IMRT
(5). Dose & Fractionation: 5400-6300 cGy in 30-35 fractions if possible (depending on the spinal cord dose).

Further Readings & References:
NCCN 2009 & Perez 2008 & AJCC 2006

Radiation Oncologist
Hon-Yi Lin 2009/03/24
Key Image(s): (with marked)

Fig. 1. Small LNs over the left level II with size less than 1 cm (as the long white arrows); three reconstruct bone flap in place (as the short white arrows).

Fig. 2. A suspect post-op lesion over the right level II, nature hardly to be defined due to confusion from post-op effect (as the white arrows).

Fig. 3. Post-surgical bed fluid accumulation (as the long white arrow); surgical clip in place (as the short white arrow).