Advanced Nasopharyngeal Carcinoma: Case study

Medical Oncology department of the Sun Yat-sen University Cancer Center
Qingqing Cai
CASE

- Male, 59y, began to have a headache in February 2015, and the left is more serious, occasionally dizzy.
- ECOG PS score: 1
- Blood: normal; liver and kidney function: normal
- No obvious complications
- EBV DNA: $1.27 \times 10^3$ copy/ml
PET-CT scan

2015-03-08 PET-CT showed

A high metabolic mass in the left side of the nasopharynx, considered nasopharyngeal carcinoma. Multiple mild hypermetabolic lymph nodes in bilateral neck. A hypermetabolic nodule in the right middle lobe, considered the possibility of metastatic tumors.
CASE REPORT

- **2015-03-12** Electronic nasopharyngeal biopsy showed: (left nasal cavity) non-keratinizing undifferentiated nasopharyngeal carcinoma.

- **2015-03-19** Received wedge resection of right middle lobe through VATS
  - ✔ Postoperative pathological diagnosis: lung metastases of nasopharyngeal carcinoma; Invasion of cancerous tissue to the subpulmonary membrane.
  - ✔ In situ hybridization: EBERs (+).
Diagnosis

- Non-keratinizing undifferentiated nasopharyngeal carcinoma with right lung metastasis
  
  T4N2M1 IVc (AJCC / UICC 2015 staging)
First-line therapy

- **2015-03 to 2015-07**
  
  **Docetaxel 130mg + cisplatin 130mg + Nimotuzumab 200mg *6 cycles**

**Response assessment: PR**

- 2015-03-08 EBV-DNA: $1.27 \times 10^3$ copy/ml
- 2015-08-03 EBV-DNA: 0 copy/ml

---

**2015-03-08 PET-CT**

- **Baseline PET-CT**
- **2015-03-08 PET-CT after docetaxel + cisplatin + Nimotuzumab *6 cycles**
First-line therapy

2015-08 to 2015-09

- **Concurrent chemoradiation: Radical IMRT** radiotherapy, prescription dose: GTVnx:70Gy/32Fr, CTV1 60Gy/32Fr?CTV2 56Gy/32Fr, GTVnD-R66Gy/32Fr, GTVnD-L66Gy/32Fr
- DDP 130mg + Nimotuzumab 200mg chemotherapy for 2 cycles
- Response assessment: CR

- 2015-09 to 2016-09: **Capecitabine 1500mg BID** maintenance treatment;
- 2017-02 PET-CT: no clear signs of tumor recurrence.
- 2017-10: EBV DNA: 0 copy/ml
Medical History Review

- 59-year-old male patient, diagnosed in March 2015 as non-keratinizing undifferentiated nasopharyngeal carcinoma with right lung metastases T4N2M1 IVc (AJCC / UICC 2015 staging)

**Treatment experience (March 2015-present)**

- Wedge Resection of right middle lobe through VATS
- Induction chemotherapy: docetaxel + cisplatin + Nimotuzumab *6 cycles (PR)
- Concurrent chemoradiation: Radical IMRT concurrent with cisplatin + Nimotuzumab * 2 cycles (CR)
- Maintenance treatment: Capecitabine for one year

- **Current disease status:** Maintain CR (last review 2018-03)
DISCUSSION

Question 1: What’s the significance of surgical resection and nasopharyngeal primary tumor radiotherapy in metastatic nasopharyngeal carcinoma?

Question 2: What’s the significance of EGFR monoclonal antibody in nasopharyngeal carcinoma (induction chemotherapy, concurrent radiotherapy)?

Question 3: What’s the significance of capecitabine maintenance in metastatic nasopharyngeal carcinoma?
CONCLUSIONS

- Surgical removal of isolated metastatic lesions and nasopharyngeal primary tumor radiotherapy can improve the outcome of patients with metastatic nasopharyngeal carcinoma.

- EGFR monoclonal antibody can improve the curative effect of induction chemotherapy and concurrent chemoradiation for patients with NPC. However, it requires further randomized phase III clinical trials to verify this conclusion.

- The value of capecitabine maintenance after induction chemotherapy and concurrent chemoradiation for patients with Metastatic nasopharyngeal carcinoma is promising.
Thank you for your attention!