The role of planned neck dissection following TAR therapy for oropharyngeal cancer

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Background

The triple combination of TS-1, vitamin A and radiation (TAR therapy) has been effectively used to treat head and neck squamous cell carcinoma (HNSCC). TAR therapy has improved organ preservation rates of locoregionally advanced oropharyngeal cancer patients. Since TS-1 can be administered orally, TAR therapy can be given in the outpatient clinic.

Oropharyngeal cancer is a subsite where chemoradiotherapy is very useful concurrent chemo-radiotherapy which may improve organ preservation and QOL of head and neck cancer patients.

Conclusions

Although the number of cases studied is low, TAR therapy gives good locoregional control of T1-T3 oropharyngeal cancer patients. Combining CT-scan, FDG-PET scan, US study in the determination of clinically CR of the neck, the integration of planned neck dissection seems to be necessary only in cases in which CR was not obtained after TAR therapy. However, there were cases in which histological evidence of cancer cells was found in the neck that were determined to be CR preoperatively. The biological destiny of few cancer cells remaining in the node following definitive chemoradiotherapy is unknown and accumulation of cases and further study is still necessary for final conclusion.

TS-1 is given orally and TAR therapy can be enforced in the clinic. TAR therapy may be a useful concurrent chemo-radiotherapy which may improve organ preservation and QOL of head and neck cancer patients.

Objective

To analyze the effectiveness of TAR therapy for SCC of the oropharynx and to examine pathology results and the necessity of planned neck dissection following TAR therapy for advanced cases.

Schedule of TAR therapy

TS-1: administered orally at a dose of 65 mg/m² twice a day.

Vitamin A (Retinol Palmitate: 50,000UI/day): administered intra-nasally on each day of radiation.

Results1 Disease control after TAR therapy

Patient Characteristics

Age; 45-82

Since our treatment strategy for T4 patients include primary surgery and neck dissection, T4 patients were excluded and T1-3 patients were included in the study. 30 operable patients with T1-3 oropharyngeal squamous cell carcinoma (stage I-2 cases, stage II-7 cases, stage III-8cases, stage IV-17cases) were treated by TAR therapy (operation). Non-operable cases were excluded from this study.

Results2 Planned Neck Dissection

Planned neck dissection is integrated in our multidisciplinary treatment using TAR therapy for N-positive oropharyngeal cancer regardless of the response in the neck.

As expected, cases which did not receive neck dissection when only a partial response was obtained after TAR therapy had poor prognosis (group 4). There were no difference in the prognosis between group 1 and 2 (clinically CR in the neck with or without neck dissection).

Histologic evidence of cancer cells was found in 4 cases out of 9 (44%) cases when only PR was obtained after TAR therapy.

As expected, cases which did not receive neck dissection when only a partial response was obtained after TAR therapy had poor prognosis (group 4). There were no difference in the prognosis between group 1 and 2 (clinically CR in the neck with or without neck dissection).

TAR Therapy for Head and Neck Cancer

TS-1: High anti-tumor activity compared to 5FU
Oral administration
Radio-sensitizer

Vitamin A: Direct anti-tumor effect
Enhances the effect of radiotherapy

Direct anti-tumor effect
Radio-sensitizer

Enhances the effect of radiotherapy