Concurrent chemoradiotherapy with intraarterial CDDP/DOC and S-1

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Objectives: To determine the effect and feasibility of concurrent chemoradiotherapy with intraarterial CDDP/DOC and S-1 for advanced head and neck cancer.

Methods: 17 patients with unresectable stage IV disease including carcinoma of the maxillary sinus (2 cases), oropharynx (11 cases), hypopharynx (1 case), parotid gland (2 cases) were treated. Patients received intra-arterial infusion of CDDP (50-70mg/m2) and DOC (50-60mg/m2) from the femoral artery followed by TARI therapy (T5-1, orally, 65 mg/m2/day, twice a day; Vitamin A (Retinol Palmitate): 50,000U/day, intra-muscularly on each day of radiation. Radiation: 1.5-2Gy/day, 5days/week). The intra-arterial infusion was repeated up to 3 times and the radiation was given up to 60-70Gy.

Results: Complete response was achieved in 10 patients and partial response in 4, giving an overall response rate of 88%. The estimated 3-year disease free survival rate was 61%. The most common Grade 3 or 4 toxicities were anorexia (50%), stomatitis (64%) and leukopenia (78%), all of which were manageable.

Conclusions: Concurrent chemoradiotherapy with intraarterial CDDP/DOC and S-1 was effective and tolerated. Our protocol does not require systemic neutralization by i.v. sodium thiosulphate and can expect systemic effect such as node involvement or systemic micro-metastasis.

Discussion and Conclusion

IA chemoradiotherapy utilizing the Seldinger’s method is still a standard therapy for locally advanced head and neck cancer. However, protocols including RADPLAT have demonstrated high loco-regional control rates and the feasibility is well studied. Protocols are now utilized in many institutions.

We have been to perform IA CDDP/DOC treatment for inoperative head and neck cancer patients in our institution and combined this with our concurrent chemoradiotherapy protocol (TAR therapy). Concurrent chemoradiotherapy with intraarterial CDDP/DOC and S-1 was effective and tolerated. Our protocol does not require systemic neutralization by i.v. sodium thiosulphate and can expect systemic effect such as node involvement or systemic micro-metastasis.

It is questionable whether to apply this method for measurable (resectable) advanced cases. However, the response rate supports further and definitive evaluation of this combination for the treatment of highly advanced head and neck cancer.