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CAN NACT CHANGE INTENT OF TREATMENT IN LOCALLY ADVANCED OROPHARYNGEAL SQUAMUS CELL CARCINOMA WITH N2, N3 METASTASIS

Oncology/Radiotherapy

Dr. Ashok Kumar Diwan Head & Professor, Department of Radiation Oncology, Government Medical College, Nagpur-440001, Maharashtra, India.

Dr. Seema Mutha* Resident, Department of Radiation Oncology, Government Medical College, Nagpur-440001, Maharashtra, India. *Corresponding Author

Dr. Vijay Mahobia Associate Professor, Department of Radiation Oncology, Government Medical College, Nagpur-440001, Maharashtra, India.

ABSTRACT

Background: Oral squamous cell carcinoma (OSCC) is the most common type of tumor in the oral cavity. Early stage tumors account for about 30% of the tumors. The majority of the tumors are locally advanced and have relatively poor prognosis with 5 years survivals <50- 60%. Neoadjuvant chemotherapy (NACT) in head and neck cancers has been investigated for long with an aim of reducing surgical margins, distant metastasis rates, andimproving outcomes. **Objective:** To assess clinico-radiological impact of NACT in locally advanced oropharyngeal SCC with N2,N3 metastasis. **Methods:** This is prospective case control study conducted at government medical college and hospital, Nagpur over 35 patients with locally advanced oropharyngeal SCCwith N2 ,N3 metastasis from May2021- May 2022. At the time of presentation, patient evaluated with clinico-radiological protocol consisting of clinical size,overlying skin induration,CECT neck and thorax. **Results:** The mean age of population was 54 yrs(24-75 yrs). Among 31 patients,1 patient who belongs to N2 stage have complete response. 15 patients, in which 11 and 4 patients are with N2 and N3 stage respectively are having partial response. 4 patients with N2 stage and 3 patients with N3 stage are having stable disease. Post-NACT 17 patients treated with radical chemoradiation. The definitive curative radiation dose administered to the primary tumor was 66-70 Gy, administered as fractions of 1.8 Gy/day, 5days/week. Weekly cisplatin at a dose of 30 mg/m² was given as an IV infusion for 1 hr period for 6-7 weekly doses during the course of radiotherapy. **Conclusion:** In developing countries like India, where patients belongs to poor socio-economic status,where patient compromise their health issues,they used to neglect their disease because of financial problem,we can do best of the treatment by giving upfront NACT to the patients of locally advanced oropharyngeal SCC with N2,N3 metastasis.

KEYWORDS

NACT, oropharyngeal squamous cell carcinoma, Cisplatin, Radiotherapy

INTRODUCTION

Squamous cell carcinoma of buccal mucosa is an aggressive cancer, reported to have worse survival and higher recurrence rate.[1] Oral squamous cell carcinoma (OSCC) is the most common type of tumor in the oral cavity.[2] Early stage tumors account for about 30% of the tumors. The majority of the tumors are locally advanced and have relatively poor prognosis with 5 years survivals <50- 60%. At present, the standard of care for resectable locally advanced OSCC is the surgical treatment of the primary tumor and neck followed by postoperative radiotherapy or chemoradiotherapy, depending on the presence of intermediate- or high-risk features.[3,4,5]

Neoadjuvant chemotherapy (NACT) in head and neck cancers has been investigated for long with an aim of reducing surgical margins, distant metastasis rates, andimproving outcomes. The meta-analysis of chemotherapy on head and neck cancer meta-analysis of 31 trials involving more than 5000 patients failed to demonstrate signifi cant survival benefit following induction chemotherapy. However, the trials that used 5- fl uorouracil (5-FU) and cisplatin as a part of NACT regime showed significant overall survival (OS) benefit compared to other combination regimens and single agent NACT.[6,7]

To improve surgical resection, to have better locoregional control, to minimize distant micro-metastasis and to maintain critical functions, induction chemotherapy has been investigated . Frequently Cisplatin and 5 Fluorouracil, along with taxanes and mitomycin have been used in neo-adjuvant chemotherapy (NACT) . Induction chemotherapy is highly active in this setting, inducing partial remission in 60% to 90% of previously untreated patients.[8,9] Thus, The stuy has been designed to assess radiological impact on NACT in orophayngeal SCC.

AIM

To assess clinico-radiological impact of NACT in locally advanced oropharyngeal SCC with N2,N3 metastasis.

MATERIALS AND METHODS

This is prospective case control study conducted at government medical college and hospital, Nagpur over 35 patients with locally advanced oropharyngeal SCCwith N2 ,N3 metastasis from May2021- May 2022.

At the time of presentation, patient evaluated with clinico-radiological protocol consisting of clinical size,overlying skin induration,CECT neck and thorax.

Then NACT was given ,as 3 weekly regimen with docetaxel and cisplatin as 75mg/m² each on day 1 and 5-flurouracil as 750mg/m² as 24 hr intravenous infusion for 5 days with granulocyte-colony stimulating factor support for three cycles.

Again patient evaluated as per clinico-radiological protocol.

Out of 35 patients ,4 patient lost to follow up.

Among 31 patients, 19 patients belong to N2 stage and 12 patients belong to N3 stage.

Response assessment was done with RECIST criteria 1.1.

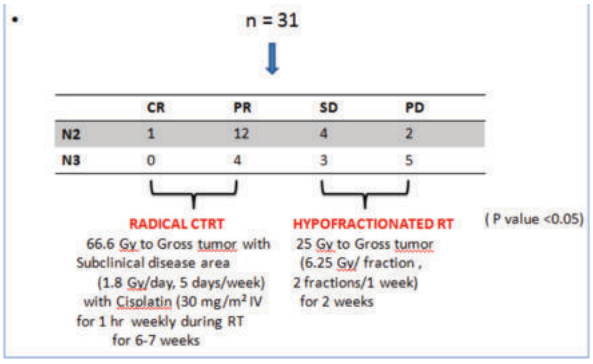
Patients with complete or partial response were considered for concurrent chemoradiotherapy and those patients who had progressive or stable disease were treated with palliative radiotherapy or chemotherapy.

All patients were followed up for 6 months

RESULT

The mean age of population was 54 yrs(24-75 yrs). Among 31 patients,1 patient who belongs to N2 stage have complete response. 15 patients, in which 11 and 4 patients are with N2 and N3 stage respectively are having partial response. 4 patients with N2 stage and 3 patients with N3 stage are having stable disease. 7 patients are having progressive disease, out of which 2 belongs to N2 stage and rest N3. (Fig 1 &2)

Post-NACT 17 patients treated with radical chemoradiation. The definitive curative radiation dose administered to the primary tumor was 66-70 Gy, administered as fractions of 1.8 Gy/day, 5days/week. Weekly cisplatin at a dose of 30 mg/m² was given as an IV infusion for 1 hr period for 6-7 weekly doses during the course of radiotherapy. 12 patients received palliative radiotherapy and 2 patient symptomatic care in view of progressive,unresectable disease.



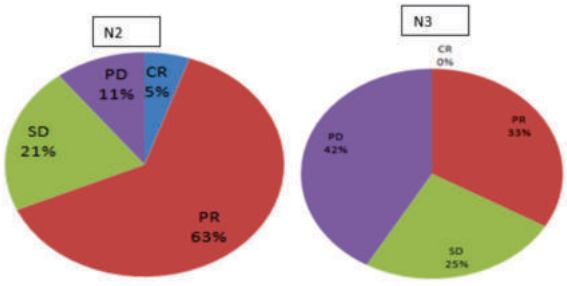


Figure 2: N2 & N3

DISCUSSION

The present study shows mean age of population was 54 yrs(24-75 yrs). Among 31 patients,1 patient who belongs to N2 stage have complete response. 15 patients, in which 11 and 4 patients are with N2 and N3 stage respectively are having partial response. 4 patients with N2 stage and 3 patients with N3 stage are having stable disease. 7 patients are having progressive disease, out of which 2 belongs to N2 stage and rest N3.

NACT has been used advanced head and neck cancers with the aim of organ preservation and for the achievement of respectability. Majority of international trials have used three drug TPF regimens for induction.[10] we have cisplatin in majority of patients. We have done radical chemoradiation in 17 Post-NACT treated patients. Similar study conducted by Joshi et al[10] and they have shown in their study as 12 patients Post NACT, underwent radical treatment in the form of total laryngectomy or total laryngectomy with partial/total pharyngectomy in the first group. All patients had R0 resection. The margins were wide in 10 patients, close in 2 patients. The present study found that the definitive curative radiation dose administered to the primary tumor was 66-70 Gy, administered as fractions of 1.8 Gy/day, 5days/week. Weekly cisplatin at a dose of 30 mg/m² was given as an IV infusion for 1 hr period for 6-7 weekly doses during the course of radiotherapy. 12 patients received palliative radiotherapy and 2 patient symptomatic care in view of progressive, unresectable disease. With the use of NACT, a reasonably good number of patients achieved resectability and organ preservation in their respective groups.

CONCLUSION

In developing countries like India, where patients belongs to poor socio-economic status,where patient compromise their health issues,they used to neglect their disease because of financial problem,we can do best of the treatment by giving upfront NACT to the patients of locally advanced oropharyngeal SCC with N2,N3 metastasis.As complete or partial response to NACT, will change the intent of treatment from palliative to curative.

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