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Advanced nose cancer patients to benefit from new standard treatment

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Using doublet chemotherapy first before concurrent chemo-radiotherapy results in 85% chance of tumour control and 95% of patients alive at three years after treatment

A new global standard treatment for high-risk locally advanced nose cancer has been established based on the findings from a multi-centre collaborative clinical trial at NCCS and China's cancer centre.

The research team has found that giving chemotherapy first for three cycles before concurrent chemo-radiotherapy to these patients, as compared to giving chemo-radiotherapy alone, will reduce the likelihood of cancer relapse and improve survival. The trial reported its 3-year results showing that one in 10 patients will avoid relapse with this new treatment, and one in 20 patients will live longer as a consequence.

The trial was conducted by a multi-centre collaborative trial network for nose cancer that includes several participating sites in China and the National Cancer Centre Singapore (NCCS), led by the Sun Yat-sen University Cancer Center (SYSUCC) in Guangzhou, China.

The study is now co-published in The New England Journal of Medicine, the top journal in the field of Science and Medicine (impact factor 79.258), and presented at the American Society of Clinical Oncology (ASCO) annual meeting, the largest annual conference in clinical oncology, on 1 June 2019.

Currently, the standard treatment for this subgroup of high-risk patients is concurrent chemoradiotherapy; this usually entails seven weeks of precise high-dose radiotherapy using intensity modulated radiotherapy (IMRT) techniques, and cisplatin (chemotherapy) is given once a week or every three weeks with IMRT.

"Although nose cancer is extremely sensitive to radiotherapy and treatment is effective in three-quarters of the patients, about 20-30% of high-risk patients will relapse in the lungs, liver and bones accounting to 90% death. We, therefore, need to optimise our ability to deliver more chemotherapy within combination with chemo-radiotherapy in these at-risk patients," says Dr Melvin Chua, a senior consultant radiation oncologist at NCCS, and a co-corresponding author of the study.

The NCCS and SYSUCC conducted a randomised controlled phase 3 clinical trial to investigate using another chemotherapy regime upfront – a doublet combo of gemcitabine and cisplatin with concurrent chemo-radiotherapy and compare head-to-head against the current standard treatment of chemo-radiotherapy alone, in newly-diagnosed locally advanced nose cancer patients. Gemcitabine-cisplatin was used here given that this regime is the first-line treatment in patients with recurrent nose cancer that has spread to other parts of the body. At the same time, it is much safer compared with a triple drug combo.

This multi-centre trial was conducted among 12 sites in China and recruited a total of 480 high-risk cases. They found that using this combination, they observed one of the highest disease control and survival rates reported to-date of 85.3 per cent and 94.6 per cent respectively, at 3-years post-treatment, versus 76.5 per cent and 9.3 per cent respectively, for those who received the standard of care. This improved survival was primarily due to a lower proportion of patients recurring in other parts of the body. Treatment was also well tolerated. More than 90%of patients completed the three cycles of induction chemotherapy, and all patients completed radiotherapy after.

These results have now established a new standard of care in patients with locally advanced nose cancer. Induction gemcitabine and cisplatin plus chemo-IMRT is a first-line treatment option in these patients.