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|  | **The Hong Kong Neurosurgical Society Limited****& Hong Kong Neurosurgical Society****28th Annual Scientific Meeting****26th & 27th November 2021** |  |
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***ABSTRACT FORM***

Abstract submission deadline: 10th September 2021

Please submit your abstract by e-mail to hoht@ha.org.hk using the format as in the sample.

**<PRESENTING AUTHOR>**

**Title (tick) :**  □ Mr. □ Ms. ✓ Dr. □ Prof./Associate Prof.

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 □ Non-member ( □ Doctor / □ Nurse / □ Research Assistant /

 □ Medical Student)

 □ Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Form of presentation desired:**

✓ Oral presentation

□ Poster presentation

□ Either Oral or Poster presentation

□ Video presentation (submit an abstract with a video (≤ 3 minutes))

**Date:** \_\_\_\_\_23 Sep 2021\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Title:**

Timing of Stereotactic Radiosurgery after Resection of Brain Metastases – Does It Affect the Outcome?

**Authors:**

CHEUNG Wing Lok, HO Man Kit Jason, YAM Kwong Yui

**Institution:**

Department of Neurosurgery, Tuen Mun Hospital

**Abstract:**

*Objective:*

To investigate whether the timing of post-operative stereotactic radiosurgery/radiotherapy would affect the local control and survival in patients with brain metastases.

*Methods:*

Patients who had brain metastases resected and treated with adjuvant single-fraction stereotactic radiosurgery or multiple-fraction stereotactic radiotherapy from 2016 to 2020 in Tuen Mun Hospital were identified. Cases of recurrent brain metastases with previous radiation and surgery were excluded. The time from surgery to MRI and SRS/SRT were recorded. The presence of local recurrence, distant brain metastases, leptomeningeal disease and radionecrosis and the survival were recorded. Potential predictive factors including age, the histology of primary, extracranial disease control, the extent of excision, number, size and site of tumour were analyzed.

*Results:*

Total 34 patients were included. The median time from surgery to SRS/SRT was 45 days (19 to 115 days). The local recurrence rate changed most significantly at a cutoff of 6 weeks. For the patients who had SRS/SRT within 6 weeks, the local recurrence rate was 6.67%. It was significantly increased to 36.8% (p=0.039) in the patients who received SRS/SRT after 6 weeks. There was no significant difference between two groups in term of median survival (23 months in group with SRS/SRT <6 weeks and 22 months in group with SRS/SRT >6 weeks). The rate of radionecrosis did not differ significantly between two groups (20% with SRS/SRT< 6 weeks vs 31% with SRS/SRT > 6 weeks, p=0.447). There was no significant difference observed in other factors including the extent of excision, extracranial disease control, the site and the size of tumour.

*Conclusion:*

Post-operative SRS/SRT should be commenced early after surgery. Delayed SRS/SRT beyond 6 weeks was associated with a lower local control rate.