Tolosa-Hunt Syndrome: Another legitimate target for radiosurgery?

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Reading articles describing the first application of a technique to a certain pathology often elicits two parallel emotions from the reader: an admiration for the bravery to be the first, followed by the realisation that it was based on previous successful or unsuccessful related interventions. The article by Lee et al. in this issue regarding Gamma Knife radiosurgery for Tolosa-Hunt Syndrome (THS) is no exception.

Considering the risks identified with treating non-neoplastic pathologies with radiation (the list is long), it is undoubtedly brave to use ionising radiation for THS. However, once one considers the often disabling degree of pain combined with other cranial nerve deficits suffered by these patients, as well as the undoubted complication rate of high-dose steroids and immunosuppressants, one fully understands why Gamma Knife radiosurgery was attempted for this pathology. The conventional treatment with steroids, particularly when the dose has to be escalated, often leads to acceptable aesthetic side effects, not to mention proximal myopathy, hypertension, and the rest.

Radiosurgery, single-fraction radiation treatment, was indeed first-time reported for this pathology in the current article. Of course, there were forerunners. Radiotherapy has been used for pseudotumour of the orbit. Furthermore, as the authors describe, there have been others introducing radiation therapy for medically intractable recurrences of THS also. In the 1980s, radiosurgery was not yet available outside the pioneering clinic

in Sweden, thus such radiotherapy was delivered to a broader field and in a fractionated manner. While it has proved successful, but must have carried the risks identified with fractionated radiotherapy for pituitary tumours: the risk of late malignancy. In order to minimise the risk to normal tissues included in the radiation field, often very long fractionation regimes were applied, accepting the inconvenience of lengthy treatment protocols.

As for many pathologies both intra- and extra-cranially, radiosurgery provides a very convenient way forward. The exquisite sub-millimetre precision of radiosurgery, particularly using Gamma Knife technology, offers a very dramatic reduction of the low-dose radiation volume into the normal tissues surrounding the target and, as a result, the risk of secondary oncogenesis is truly minimised [1]. At the same time, the one-day treatment offers such convenience that tolerance and compliance is vastly improved without compromising efficacy and safety.

Whilst it is highly unlikely that this treatment would make steroid treatment as the first line outdated, Gamma Knife radiosurgery may be an alternative that should be, and will be, used as an early option for THS in the future. Given that this journal is predominantly read by neurosurgeons, one hopes that this information percolates through to our neurologist colleagues who may otherwise remain reluctant to utilise radiation even for resistant cases.

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