

Novel Use of Baclofen in Cancer Patients for the Treatment of Hiccups

Dear Editor,

A hiccup is a result of an involuntary, intermittent spasmodic contraction of the diaphragm and the inspiratory intercostal muscles, resulting in a sudden inspiration and ends with an abrupt closure of the glottis.

We experienced the successful use of baclofen for the treatment of hiccups in 2 cancer patients in an inpatient rehabilitation unit of a tertiary cancer centre. One of them was a 22-year-old male with a history of neurofibromatosis type 2 with numerous resections for various tumours including a right vestibular schwannoma and a foramen magnum meningioma. He last underwent resection of 4 intramedullary cervical ependymomas with associated syrinx (Fig. 1). During his postoperative recovery, he developed acute hiccups. This was resolved after 2 doses of oral baclofen of 5 mg each, 6 hours apart. A lower dosage of baclofen was prescribed as he was at risk of sedation from baclofen. The other patient is a 72-year-old male with concomitant rectal and prostate cancer who underwent abdominal and pelvic surgery that involved extensive resection and reconstruction. He suffered a stroke postoperatively. He also experienced abdominal bloating associated with hiccups that resolved with 2 doses of oral baclofen of 10 mg each, 6 hours apart. A higher dosage was prescribed as he was further out from the stroke, with no cognitive deficits. Both patients did not have prior non-pharmacological treatment and remained symptom free after discontinuation of baclofen.

The aetiology of hiccups is varied. Contributing factors for the first patient include central nervous system tumours, possible phrenic nerve damage (Fig. 2) and having undergone anaesthesia and surgery. Causes for hiccups in the second patient include a stroke (central nervous system insult) and abdominal distension post surgery.

Chlorpromazine has been conventionally used for the treatment of hiccups. Drugs that have been used off-label for such treatment include metoclopramide, gabapentin, anticonvulsants and even marijuana.¹⁻³ For refractory hiccups, phrenic nerve neurolysis, nerve blocks and a phrenic nerve stimulator, have been described.⁴ In one study, chlorpromazine was found to be sedating and resulted in reduced participation in an inpatient rehabilitation programme.¹

Baclofen is a gamma-aminobutyric acid (GABA) derivative, which has been frequently used in the treatment of spasticity and spasms in the rehabilitation population. Its effective use in the treatment of hiccups has been reported.^{5,6} The mechanism of action of baclofen on the treatment of hiccups could be similar to that for spasms. Hiccups

could be considered to be the dysfunction of the reciprocal inhibition of the inspiratory complex, similar in a way to spasticity, which is a lack of inhibition and “over-firing” in the central nervous system. The use of baclofen as a first line treatment for hiccups could be considered when the patient has no underlying oesophageal disease and if the patient has concomitant spasticity or recurrent hiccups. Baclofen was also found to be helpful in the treatment of chronic hiccups.⁶

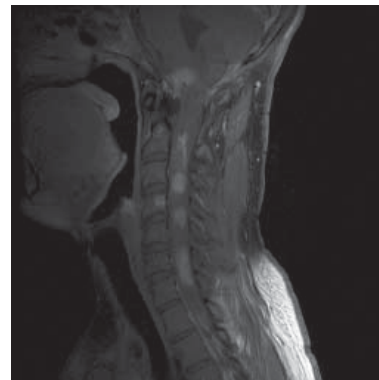


Fig. 1. Cervical ependymomas in a patient with neurofibromatosis type 2.



Fig. 2. Elevated right hemidiaphragm in a patient with neurofibromatosis type 2 presenting with multiple tumours and hiccups.

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