Cervical Phrenic Nerve Block for Intractable Hiccups in Cancer Patients

Takiguchi et al. (1) have recently emphasized the occurrence of hiccups in cancer patients as a poorly recognized complication of chemotherapy. Hiccups is indeed a relatively frequent problem in these patients that usually occurs when there is continuous phrenic nerve or diaphragmatic irritation (for example, from mediastinal or abdominal tumors or abscesses, hepatomegaly, ascites, esophagitis, or gastric distension) or as a consequence of treatment with chemotherapy or related drugs, such as antiemetics or corticosteroids (1,2). When hiccups are severe, they become an incapacitating symptom that is difficult to treat. Besides vagal maneuvers, the preferred approach for treating hiccups is the systemic administration of different drugs (2,3): dopaminergic antagonists (chlorpromazine, haloperidol), antiarrhythmics (phenytoin, lidocaine (4), nifedipine, quinidine), or central non-opioid analgesic agents (baclofen, nefopam) (5). All of these can produce considerable side effects and are not always successful.

It has been reported that phrenic nerve block can be useful in the therapy of intractable hiccups as well as in the palliation of supraclavicular referred pain secondary to diaphragmatic irritation (6), but this is a fairly unknown therapeutic technique in the oncology community (7) and, consequently, rarely used for cancer patients. We evaluated the feasibility and efficacy of cervical phrenic nerve block in five consecutive metastatic cancer patients (pancreas [2], lung [1], stomach [1], Merkel’s cell [1]) with intractable hiccups resistant to standard therapy.

Briefly, the phrenic nerve arises mainly from fibers of the fourth cervical nerve, passes bilaterally between the sternocleidomastoid and omohyoid muscles and, along with the subclavian vessels, enters the mediastinum downwards to provide motor innervation to both hemidiaphragms. The five patients were treated with local administration of 4 cc of 1% lidocaine plus 40 mg of depot-triamcinolone at the level of the cervical phrenic nerve. Under ultrasound

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control, the medication was injected at a point 1 inch above the clavicle, at the groove between the posterior border of the sternocleidomastoid muscle and the anterior scalene muscle, with a slightly anterior trajectory. After inserting the needle to a depth of approximately 1 inch, aspiration was carried out to identify blood or elicitation of brachial plexus paresthesia; if negative, the solution was slowly injected.

The hiccups stopped within five minutes in all five patients. No recurrence was seen in three patients. In the other patients, hiccups recurred within 4 days. Phrenic nerve block was repeated in both patients (once and twice, respectively), and hiccups did not appear again in the first patient and relapsed but with decreased frequency and forcefulness in the second one. No side effects were recorded.

Cervical phrenic nerve block for intractable hiccups is a useful and discrete method which might be of great value to cancer patients with this distressing problem for whom pharmacologic management has failed.

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REFERENCES

NOTES
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