中文題目：使用 Bromocriptine 治療乳癌腦轉移引起之中樞性高熱：案例報告

英文題目：Effective management of central hyperthermia with bromocriptine in a breast cancer patient: a case report

作　　者：葉雲凱[1] 賴峻毅[2] 劉峻宇[3]

服務單位：[1]台北榮民總醫院內科部, [2]台北榮民總醫院腫瘤醫學科, [3]台北榮民總醫院輸血醫學科

***Background**:*

Fever is a common manifestation in hospitalized patients. The etiologies of hyperthermia involves numerous possibilities including infection, inflammation, autoimmune causes, drug related fever, and others. Central hyperthermia, commonly known as central fever or CF, has been reported to have a rapid onset of high temperature with fluctuation, and has been associated with worse mortality in intracerebral hemorrhage patients. CF has been reported in 46.8% of fever patients in neurologic intensive care unit (ICU) . Bromocriptine has been reported as effective treatment for CF in ICH patients. We present a case of breast cancer with brain metastases associated with CF, and successful recovery after bromocriptine use.

Case presentation:

A 46 year old woman with an underlying disease of neuromyelitis optica spectrum disorder and she is in diplegia status with long-term Foley insertion for over 10 years. She presented to our emergent room due to fever. During the initial workup, chest x ray revealed multiple lung metastases. She was then admitted to our oncology ward for further survey. At admission, her consciousness was clear with full GCS score. Tumor survey revealed a right breast mass which was further diagnosed of invasive ductal carcinoma, triple negative subtype, confirmed by biopsy. Chest computerized tomography (CT) showed multiple lung metastases, and whole body bone scan also revealed multiple bone metastases. Delirium with hallucination and irregular breathing was complained at night without new focal weakness. Brain magnetic resonance imaging (MRI) revealed multiple brain metastases with mid-line shift and impending uncal herniation.

Since admission, she presented with fluctuating high fever with peaks of 39 to 41 degrees Celsius. No infection focus or microbiological culture could be demonstrated despite multiple attempts of workup for infection. Empirical antibiotics use did not alter the fever pattern, as well as standing doses of analgesics including acetaminophen. Metabolic profiles and autoimmune parameters were also non-contributory. We added naproxen to cover suspected tumor fever on day 4 of admission. Due to no infection evidence, we discontinued antibiotic on day 8 of admission. Nevertheless, fever still persisted under dexamethasone, acetaminophen and naproxen. Consultation of our neurologist did not favor an etiology related to her underlying neuromyelitis optica spectrum disorder. Malignant hyperthemia was also excluded due to normal creatinine kinase levels and no related

offending drugs. Drug fever was also ruled out after a careful review of her drug history and pharmalogical review. She was started on chemotherapy with gemcitabine and paclitaxel. Although tumor related symptoms such as breast mass swelling and tumor markers started to improve after initiation of chemotherapy, there was no significant decrease of her fever peak levels.

After excluding common etiologies of fever for this patient, we tentatively diagnosed her with malignancy related CF. Based on multiple case reports, a diagnostic trial of bromocriptine, 2.5mg, 3 times a day was started and naproxen was discontinued. Dramatically, the fever peak decreased after bromocriptine was initiated and her body temperature normalized rapidly. Bromocriptine was titrated down to 2.5mg once daily gradually. No high peaking fever further occurred and the patient was discharged with bromocriptine 2.5mg once daily under stable condition. No more fever episodes were reported and the patient continued with her systemic treatment for cancer smoothly.

Conclusion:

We presented a case of CF caused by brain metastatic tumor and was successfully treated by bromocriptine. Still, we need further study to demonstrate the efficacy, duration and long-term outcome of bromocriptine use in patient with CF