

Acute Mania: A Rare Adverse Effect in a Patient Undergoing Ifosfamide-Based Chemotherapy

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Background

- Ifosfamide (IFO) is a cytotoxic drug used for a variety of malignancies that has been associated with encephalopathy¹
- Case reports on IFO-induced mania and psychosis²⁻⁴
- Case of probable (Naranjo score 7)⁵ IFO-induced mania that persisted despite withdrawal of the offending agent and treatment for IFO encephalopathy

IFO-encephalopathy

10-30% of patients
AMS, somnolence, weakness, seizures, coma
Usually self-resolves with withdrawal of IFO
Responsive to methylene blue within days

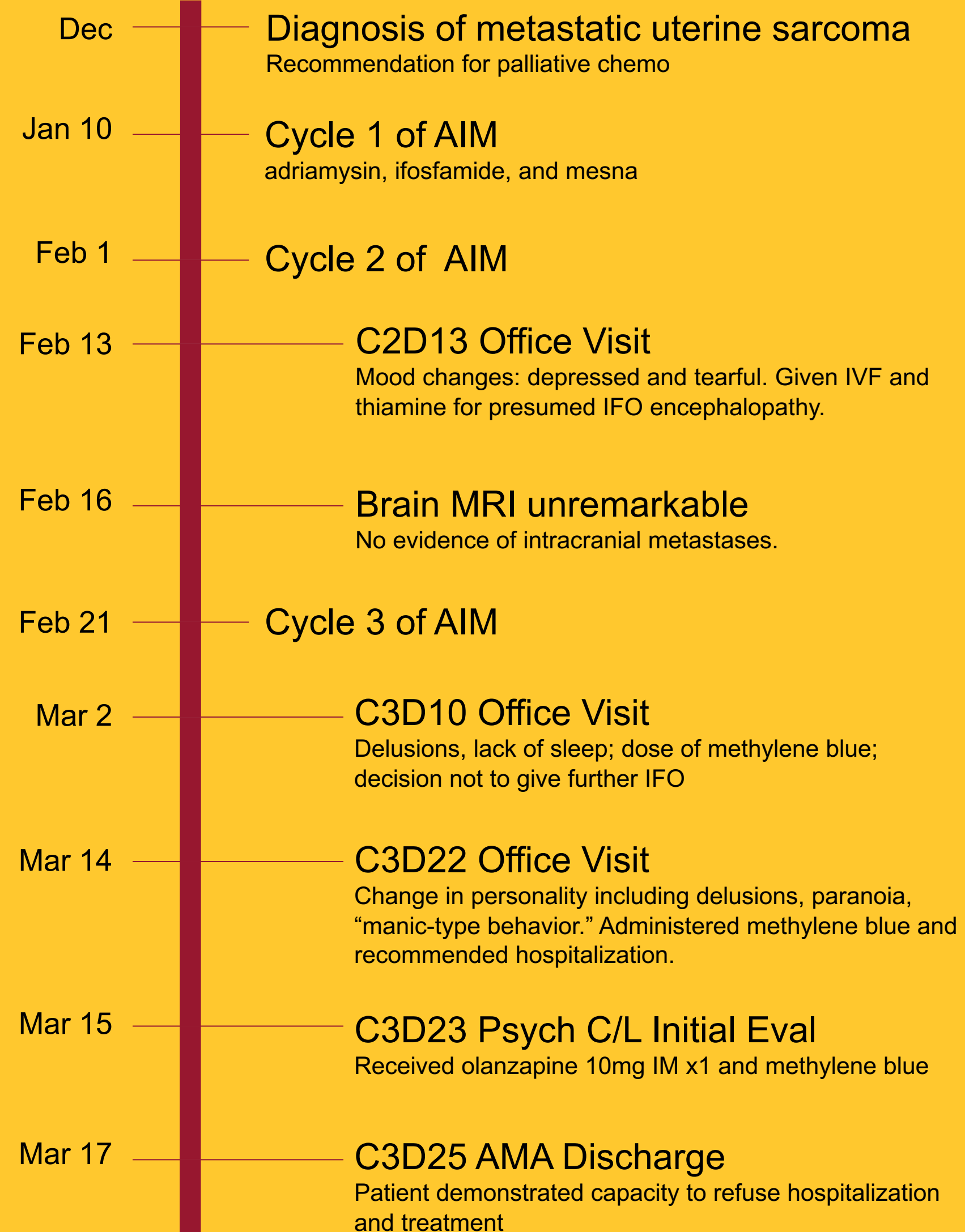
IFO-mania

Case-report level
Elevated/irritable mood, increased energy, impulsivity, grandiosity
Unclear if self-resolves
Responsive to benzodiazepines and antipsychotics

IFO
Sleep changes
Delusions
Hallucinations
Unremarkable labs and imaging

Case

- 65-year-old female with no psychiatric history
- Medical history of metastatic uterine sarcoma
- Admitted to oncology for behavioral changes following third course of IFO-based chemotherapy



Subjective:

Patient states she is "really mad" that she's admitted, reporting that her oncologist "put me here because he wants to collect on my good insurance..." She says she's "completely cured of my cancer... I'm a miracle, I have super strength, like super strong martial arts, and I can take on everyone now so they are all scared." She also states she gave her oncologist "God-like qualities... I've sent him so many emails about the truth of my abuse... I can't believe he's doing this to me!"

Collateral: Since cycle 3, decreased need for sleep, impulsivity, grandiosity, distractibility

Objective:

MSE: +PMA, pressured speech, irritable and labile affect, flight of ideas, delusional and hyperreligious content, impaired insight, judgement, and impulse control

Assessment/Plan:

Diagnosed with mania secondary to IFO given her lack of mood disorder history and the close temporal relationship to IFO administration

- Initiate standing and PRN olanzapine
- Per oncology: continue methylene blue; IFO-sparing chemo in future

Discussion

Persistence of manic symptoms in this patient even after discontinuation of IFO and treatment with methylene blue suggests IFO-induced mania is a distinct clinical entity from IFO encephalopathy.

Our case adds to the limited body of evidence that IFO can induce mania, an adverse effect with potentially devastating consequences for oncologic care.

References

1. Ajithkumar T, et al. Ifosfamide encephalopathy. Clin Oncol (R Coll Radiol). 2007 Mar;19(2):108-14.
2. Brieger P, et al. Manic episode in an ifosfamide-treated patient. Gen Hosp Psychiatry. 2000 Jan-Feb;22(1):52-3.
3. Kerdudo C, et al. Ifosfamide neurotoxicity: an atypical presentation with psychiatric manifestations. Pediatr Blood Cancer. 2006 Jul;47(1):100-2.
4. Hernández R, Juan O, Alberola V. Ifosfamide-induced psychosis. Acta Oncol. 2004;43(1):119-20.
5. Naranjo, C. A., et al. (1981). A method for estimating the probability of adverse drug reactions. Clinical pharmacology and therapeutics, 30(2), 239-245.