

Severe Multiple Organ Damage by Uracil-Tegafur in Stage IB Lung Cancer

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Abstract

A 66-year-old female undergoing a left upper lobectomy for stage IB lung cancer developed multiple organ failure including liver injury, acute pancreatitis, and renal failure after taking UFT as postoperative adjuvant chemotherapy. The adverse effects of UFT showed quite rapid progress. It is important to instruct patients to have blood tests immediately when they have some gastrointestinal symptoms such as vomiting, epigastralgia, oliguria, and fever.

Introduction

UFT (uracil-tegafur) is used as adjuvant chemotherapy for postoperative patients with stage IB lung cancer in Japan [1-4], and is used in combination with leucovorin for those with colon cancer. The adverse effects of UFT include severe liver damage, which occurs at the rate of 1%-2% [1,2,5-7]. Here, we report a case of UFT-induced multiple organ damage including acute liver damage, renal failure, and pancreatitis in postoperative lung cancer.

Presentation of Case

A 66-year-old female underwent a left upper lobectomy for lung cancer. Because the final diagnosis was adenocarcinoma (papillary 50%, lepidic 20%, acinar 20%, solid 10%), T2aN0M0 stage IB (Tumor size 4.5×2.3×2.0cm, pm0, pI0, v0, Ly0), UFT was administered beginning on Oct 22 (Day 1) after the patient was fully informed about the effectiveness and the potential adverse effects of UFT. She showed normal blood test data until Day 14. She exhibited vomiting, epigastralgia, appetite loss, oliguria, and high fever of 39°C on Day 16, and was admitted to our hospital due to shock on Day 18.

On admission, the patient was alert, but could not sit up due to hypotension (BP 56/34). Because her blood test data revealed severe liver damage (AST 5712 U/L, ALT 3571 U/L, and ammonium 174 µg/dL), we conducted plasmapheresis immediately to remove the UFT. We treated her with continuous hemodiafiltration for 4 days due to acute renal failure. We also diagnosed pancreatitis based on the patient's symptoms and the abdominal CT finding of edema around the pancreas (Figure 1). The patient



Figure 1. Pancreatitis in the patient's abdominal computed tomographic scan.

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developed disseminated intravascular coagulation (DIC) (PLT 48,000 cmm, FDP 98.7 ng/mL, and PT-INR 2.86). We treated the pancreatitis and DIC with anti-trypsin and gabexate mesilate (FOY). This treatment successfully improved the renal failure, pancreatitis, DIC and liver damage on Days 27, 34, 41, and 46, respectively.

Discussion

The reported adverse effects of UFT include liver damage, but not renal failure, pancreatitis or DIC [1,2,5-7]. Taking the present case into account, it appears that UFT treatment may also damage multiple organs including the liver, kidney, and pancreas. We note that our patient's organ damage following UFT treatment developed quite rapidly. Clinicians should thus instruct patients to undergo blood testing immediately when symptoms such as vomiting, epigastralgia, oliguria, and fever appear. In cases of severe liver damage, the application of plasmapheresis should be considered as early as possible.

Conclusion

We emphasize that adverse effect of UFT treatment such as liver damage can develop quite rapidly to a critical condition. It is important to instruct patients to promptly report symptoms such as vomiting, epigastralgia, oliguria, and fever.

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