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Category: Case report

Title: Reactivation of hepatitis in a bladder cancer patient receiving chemotherapy.

Running title: Reactivation of hepatitis in bladder cancer

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Abstract

Reactivation of hepatitis is a serious complication of chemotherapy in hepatitis B virus (HBV) carriers. There are many reports of this in lymphoma patients but few in urological cancer patients.

A 59-year-old woman with bladder cancer who was an HBV carrier developed severe liver dysfunction after 2 cycles of chemotherapy. The diagnosis was reactivation of hepatitis. She improved with administration of lamivudine

with a steroid and is currently well without disease.

Conclusions: Care should be taken about the risk of reactivation when performing chemotherapy in HBV carriers and prophylaxis by lamivudine should be considered.

Key Words: hepatitis B virus, chemotherapy, reactivation, lamivudine,

Introduction:

Reactivation of hepatitis is a serious complication of chemotherapy in hepatitis B virus (HBV) carriers. There have been a number of cases reported during treatment of lymphoma; however, only one case has so far been reported for urological cancer treatment. [1] We herein report a case of chemotherapy-induced hepatitis flare in a patient with bladder cancer.

A 59-year-old woman was diagnosed as having infiltrating bladder carcinoma with metastasis to local lymph nodes. She was an HBV carrier but had no active hepatitis and a normal alanine aminotransferase level (ALT, normal <40 IU/l), positive HBs Ag, positive anti-HBe Ab, positive serum HBV-DNA (4.9×10^6 copies/mL, normal < 4×10^2 copies/mL). Following cystectomy she received chemotherapy consisting of methotrexate, epirubicin and cisplatin. At the end of the second cycle of chemotherapy, just after the withdrawal of 4 mg/day dexamethazone for antiemesis, she presented with general fatigue and appetite loss. Laboratory tests showed ALT elevated to 2,000 IU/l (Fig. 1). Although her serum HBV-DNA level decreased to 4.7×10^2 copies/mL, she was diagnosed as having reactivation hepatitis because a thorough evaluation did not indicate any other cause for liver dysfunction. She was started on lamivudine at 100mg/day with 500mg of steroid therapy for 3 days. One week later she developed reversible posterior leukoencephalopathy syndrome, and required an anticonvulsion agent and respiratory care for 1 month. She improved 3

months later; ALT normalized and serum HBV-DNA was undetectable when lamivudine was stopped. After the discontinuance of chemotherapy she has been well without evidence of cancer recurrence or hepatitis for 2 years of follow-up.

DISCUSSION:

Reactivation of HBV is well known in lymphoma patients undergoing cytotoxic chemotherapy. The mechanism of flare in HBV carriers has not been clearly elucidated, though a possible mechanism is that increased HBV-infected hepatocytes due to immunosuppressive agents are disintegrated by the attack of restored activated T cells after the withdrawal of the agents. [2]

The frequency of HBV reactivation in HBs-Ag-positive lymphoma patients receiving chemotherapy was reported to range from 15-20%. The HBV-DNA usually rises and drops rapidly soon after ALT elevation, so the true incidence of HBV reactivation might be underestimated in retrospective studies. In fact, we did not detect a rise of HBV-DNA during the clinical course. Patients with positive HBV-DNA have a risk for flare-up. In addition, the use of steroids was reported to be a risk for reactivation. Upon withdrawal of steroids, there is an intense rebound in cytotoxic T-cell function that coincides with a surge in serum ALT and decreases in the levels of HBsAg and HBV-DNA. [3]

Lamivudine inhibits reverse transcription activity and DNA synthesis, is well tolerated and the adverse effects are mild. However, long-term lamivudine use is associated with the development of lamivudine-resistant mutant strains of HBV. Despite this risk, prophylaxis against chemotherapy-induced reactivation is recommended. [4]

There has hitherto been only one report of HBV reactivation in urological cancer chemotherapy. However, as our case demonstrates, this remains a possibility and care should be taken about reactivation when performing chemotherapy in HBV carriers; monitoring HBV-DNA is mandatory and prophylaxis by lamivudine should be considered.

REFERENCES

1. Seksik P., Nahon S., Lesgourgues B., Cadranel J.F., Mariaud De Serre N., Lenoble M., Lahmeck P., Charoud A., Delas N.; Efficacy of treatment with lamivudine in two patients with severe reactivation of hepatitis B after withdrawal of chemotherapy. *Gastroenterol Clin Biol*, 2000; 24: 671-4.
2. Lau, G. K. K., Liang, R., Chiu, E. K. W., Lee, C. K. and Lam, S. K.; Hepatic events after bone marrow transplantation in patients with hepatitis B infection: a case controlled study. *Bone Marrow Transplant*, 1997; 19: 795-799.
3. Cheng, A. L., Hsiung, C. A., Su, I. J., Chen, P. J., Chang, M. C., Taso, C. J., Kao, W. Y., Uen, W. C., Hsu, C. H., Tien, H. F., Chao, T. Y., Chen, L. T. and Jacqueline, W.P.; Steroid-free chemotherapy decreases risk of hepatitis B virus (HBV) reactivation in HBV-carriers with lymphoma. *Hepatology*, 2003; 37: 1320-1328.
4. Simpson ND, Simpson PW, Ahmed AM, Nguyen MH, Garcia G, Keeffe EB, Ahmed A: Prophylaxis against chemotherapy-induced reactivation of hepatitis B virus infection with lamivudine. *J Clin Gastroenterol* 2003; 37(1): 68-71.

Figure legends

Figure 1: The time courses of ALT and HBV-DNA.

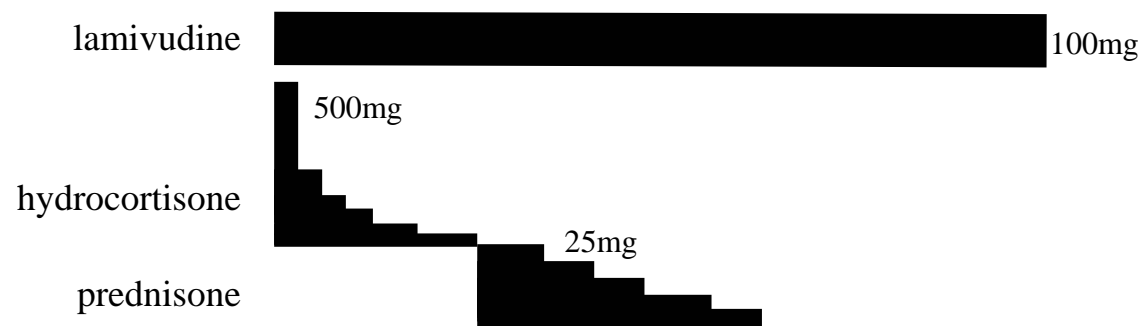
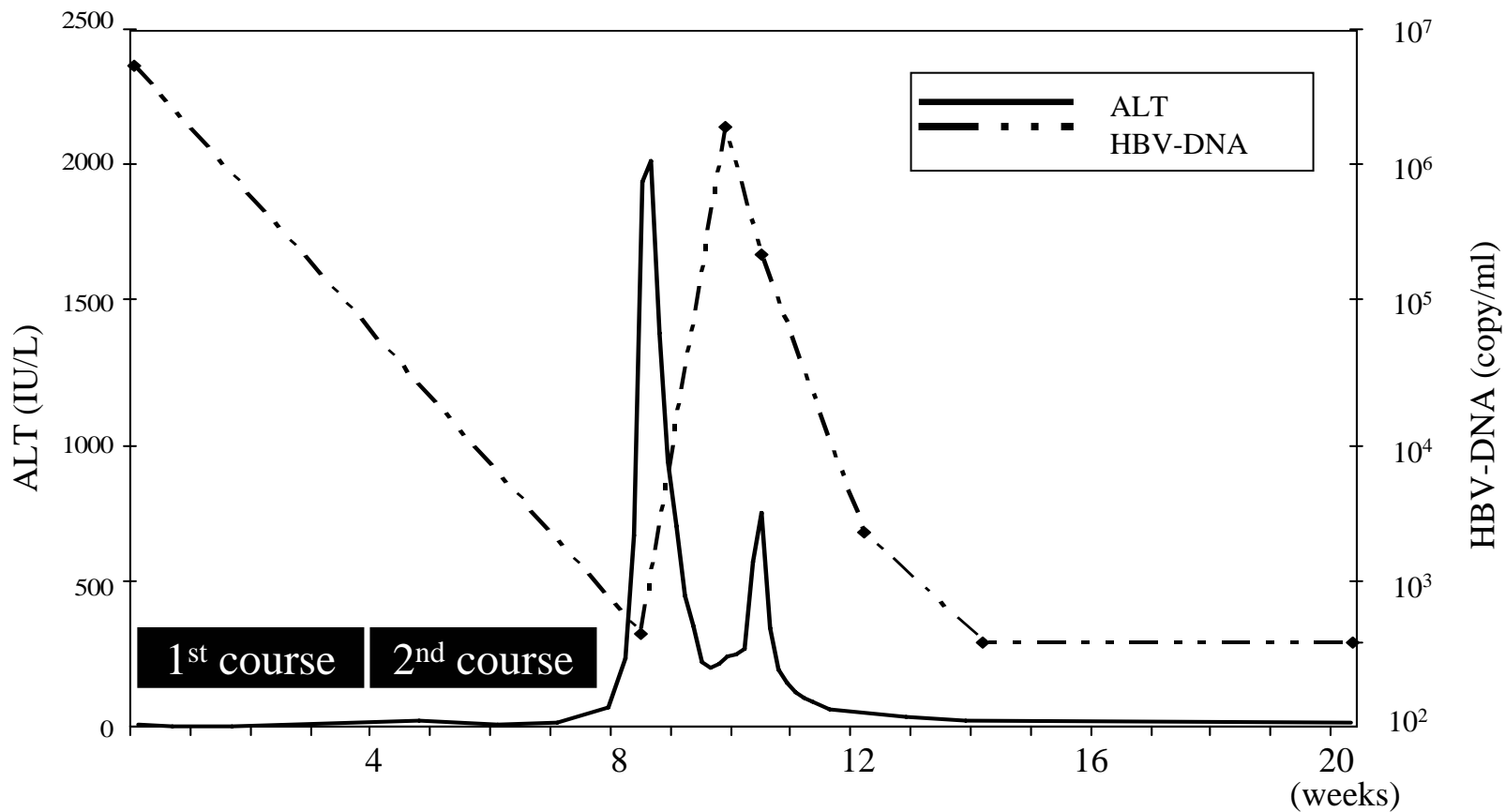


Fig. 1