Case Report

Fatal Liver Failure Related to Gemcitabine Therapy

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Case Report

A 49-year-old male was admitted for adjuvant chemotherapy. He had left-upper pulmonary lobectomy for moderately-differentiated adenocarcinoma (Ib stage) before 3 months. He had no prior medical history of hepatic disease, and his hepatic function was normal. Subsequently, he was treated with gemcitabine 1,000 mg/m^2 (i.v. days 1 and 8 of a four-week cycle) (Eli Lilly and Company) and oxaliplatin 130 mg/m^2 (i.v. days 1) (Jiangsu Hengrui Medicine Co., Ltd.). The patient had nausea and vomiting and 5× 10^{9}L^{-1} of platelet in the 11th day of the second of chemotherapy. Recombinant human thrombopoietin injection (15 000IU/d, i.h, days 1-5) (Shenyang Sunshine Pharmaceutical Company Limited) and platelet injection were used, the count of platelet was normal gradually. But routine biochemical studies revealed abrupt elevation of serum alanine and aspartate aminotransferase concentrations to 7,015IU/L(normal value 5-60IU/L) and 2,563IU/L(normal value 5-55IU/L). Total bilirubin rose to 231μ mol/L (normal value 0-20μ mol/L), direct bilirubin rose to 154μ mol/L (normal value 0-6.8μ mol/L). Abdominal ultrasonography and enhanced MRI showed no dilated bile ducts and intra-/extra-hepatic mass, which proved non-obstructive jaundice. Because of refusal of his family, liver biopsy was not performed. The hepatic function was recovered as a result of timely protecting liver therapy 30 days after the initiation of the combined chemotherapy.

A 51-year-old female was admitted for gingival bleeding, hematemesis and black stool. She had right-upper pulmonary lobectomy due to adenocarcinoma (Ⅲa stage) before 2 months. Subsequently, she was treated with gemcitabine 1 000 mg/m^2 (i.v. days 1 and 8 of a four-week cycle) and oxaliplatin 130 mg/m^2 (i.v. days 1).The patient had gingival bleeding, hematemesis, black stool and 3× 10^{9}L^{-1} of platelet in the 18th day of the second of chemotherapy. Routine biochemical studies revealed abrupt elevation of serum alanine and aspartate aminotransferase concentrations to 3371IU/L and 6261IU/L.Total bilirubin rose to 92μ mol/L, direct bilirubin rose to 48.9μ mol/L. Abdominal CT showed no hepatic mass. Viral markers for hepatitis were all negative. She died as a result of rapidly progressive hepatic failure 19 days after the initiation of the combined chemotherapy. Autopsy was not permitted.

Discussion

The main side-effect of these two antitumor drugs is myelosuppression. It is well known that gemcitabine and oxaliplatin do not have severe toxicity; however, the cases of liver injury that developed after treatment with gemcitabine and oxaliplatin were recently fetal in our patients.

Liver biopsy or autopsy is standard method, which will be to confirm the cause of hepatic failure, but not easy to generalize. The etiology of the above liver function failure should to be identified, for example ①viral hepatitis, both patients denied hepatitis, and viral markers for hepatitis were all negative; ②primary liver cancer or liver metastatic carcinoma[1], the abdominal ultrasonography or enhanced MRI or CT showed non-obstructive mass after liver function failure. ③poisoning, both toxic mushroom and carbon tetrachloride poisoning were eliminated because of non-contact history. Drinking history was not existed. ④drugs, live injury was appeared after chemotherapy, gemcitabine and oxaliplatin drugs may be the main cause. In the previons literature, the correlation of oxaliplatin and fetal live failure need to confirm [2]. To our knowledge, gemcitabine was the only cause of the live failure. Fatal hepatic failure related to gemcitabine has previously been reported [3-5]. The mechanism by which gemcitabine may cause liver damage is not known. But, in the pathogenesis, endothelial injury through chemotherapy would cause capillary leakage and activation of the coagulation cascade, resulting in hepatic veno-occlusive disease [6].

Regardless of the mechanism, however, physicians treating patients with these antitumor drugs should be alert to the possibility of fatal hepatic failure during the therapy [7]. The first patient is live because of early detection and early treatment, however the second one was too late to our hospital and died after two days admitting. Careful monitoring is necessary during gemcitabine therapy, especially in patients with liver dysfunction.

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BLS BRITISH LYMPHOLOGY SOCIETY

Promoting Professional Lymphoedema Services

The British Lymphology Society (BLS) has a board of Trustees who co-ordinate the work of the Society, and strive to develop the organisation to better meet the needs of its membership.

BLS is a charitable organisation with a membership of health care professionals from various specialities, and others who have a direct interest in promoting effective management of lymphoedema and the work of the Society.

What is the work of the society?

The main aims of BLS are to:

1.Promote awareness about lymphoedema to the public, health care professionals and relevant departments within the Department of Health. This will include awareness about patients who are 'at risk', and those with chronic oedema with lymphatic deficiency (COLD).

2. Re-evaluate current lymphoedema guidelines, and publish evidence-based standards that underpin treatment for the long term management of lymphoedema and COLD.

3. Be actively involved in promoting the need for equitable and sustainable services for people living with lymphoedema or COLD.

4. Ensure that members are central to the future development of the Society.

5. Ensure that the patient's perspective is reflected in issues related to service development and delivery of care within the UK.

6. Encourage participation in research, using validated methodology, to advance and improve outcomes for patients with lymphoedema and COLD.

7. Raise awareness about minimum standards, as defined by BLS, and endeavour to ensure that any person with lymphoedema should have access to a service that provides minimum standards.

8. As an organisation, BLS is committed to continuously working towards improving channels of communication. With the re-launch of the website on the 18th May 2007, we hope to encourage greater interaction and sharing of information.

For further information and details please contact:

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