Intra-abdominal abscess and tumor-enteric fistula formation: An unusual complication of chemotherapy for advanced testicular choriocarcinoma

Rapid tumor lysis following intensive chemotherapy for metastatic or locally advanced tumors has been described as resulting in spontaneous malignant pneumothorax and gastric or bowel perforation. Bowel wall involvement by tumors may lead to necrosis and, eventually, to perforative sequelae such as intra-abdominal abscess formation, clearly visualized on CT scan and/or by ultrasonography [1–3]. Primary contributing factors are drug-induced immunocompromised states, such as neutropenia-induced infection and local ischemic events due to obstructive edema and drug-induced ileus (vincristine). The resultant bowel stasis may lead to bacterial overgrowth at sites of denuded and damaged mucosa [4].

Germ cell malignancies are highly chemosensitive. Following cisplatin-based chemotherapy for bulky retroperitoneal masses, primary complete remission can be obtained in 60%–80% of patients while in another 10%–15%, disease-free status can be achieved by surgical removal of the residual tumor [5]. We describe an unusual case of intra-abdominal infection following chemotherapy for advanced testicular carcinoma.

A 24-year-old male patient was referred to the Oncology Department of the Rambam Medical Center following left inguinal orchiectomy. Histology demonstrated pure choriocarcinoma. Physical examination revealed a huge left abdominal mass. CT scan and ultrasound showed a bulky retroperitoneal mass encasing the aorta, and moderate left hydropnephrosis. Chest X-ray and CT scan were consistent with multiple bilateral lung metastases (maximal diameter 1 cm). The β-subunit of human choriongonadotrophin (β-HCG) was 292,000 units, and α-fetoprotein level was within normal range.

The standard BEP regimen (bleomycin, VP-16, cisplatin) was initiated. Following two full-dose BEP cycles, a good partial remission was noted. The β-HCG levels dropped rapidly (62 units). On day 11 of the second BEP cycle the patient became febrile (up to 39 °C), without neutropenia or any evidence of infection. His general condition was good. Results of a repeat abdominal CT scan were consistent with a huge polycyclic, necrotic tumor mass in the left abdomen (Figure 1). As the fever did not resolve, fine needle aspiration was performed under CT guidance, yielding serous fluid positive for Escherichia coli.

The patient was started on broad spectrum antibiotics and a CT-guided drain was inserted into foci of apparent abscess, yielding mixed bacteriological culture, positive for gram-negative and gram-positive bacilli and gram-positive cocci.

Due to the unresolved fever and persistence of the intra-abdominal infection, the patient underwent surgical removal of the necrotic and infected retroperitoneal masses, including adherent small bowel loops, because of an existing fistula between the loops and the tumor mass. An attempt was made to resect all residual tumor masses, but optimal debulking could not be achieved. Histological specimens of the intestinal wall, including the fistulous area, revealed necrosis, inflammation and infiltration by malignant trophoblasts (Figure 2).

The level of β-HCG was still high following surgery (103 units), indicating persistent disease. A second-line regimen consisting of ifosfamide (with Mesna), etoposide (VP-16) and cisplatin was introduced. On this protocol, tumor markers returned to normal, as did results of the chest CT. The remaining retroperitoneal masses disappeared almost completely.

The patient underwent re-resection of the residual retroperitoneal masses, which proved to be fibrosis alone, without evidence of persistent infection. He is currently being followed, with no evidence of disease or disabling side effects.

Our patient exhibited an extremely rare instance of intra-abdominal abscess and tumor-enteric fistula formation.
abdominal infection and fistula formation within necrotic masses. We hypothesize that the fistulization began as a tumor-lysis-like ulceration burrowing through infected bowel loops and communicating with shrinking tumor masses. Primary treatment consists of broad-spectrum antibiotics, followed by surgical intervention.

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1 Department of Oncology (Chemotherapy Unit), 2 Department of Diagnostic Radiology, 3 Department of Pathology, 4 Department of Gastroenterology, Rambam Medical Center and Faculty of Medicine, Technion – Israel Institute of Technology, Haifa 31096, Israel

References


Oral idarubicin and prednisone for advanced, previously untreated, multiple myeloma: A pilot study

The usual initial treatment for multiple myeloma (MM) is oral melphalan and prednisone (P) which is easily administrable, and safe and effective in 50% of cases.

The alternative approach, i.e., combination chemotherapy, consists of the intravenous administration of several drugs, and often requires hospitalization. It has more side effects, including neutropenia, of grades 3 and 4 in 8 (23%) and in 2 (5%), respectively, of 35 evaluable courses. The nadir occurred between the 12th and 15th days and lasted a median of 3 days. Thrombocytopenia was unusual.

The two grade 4 leukopenic episodes occurring after the first course, with 15 (no. 9) and 18 (no. 14) mg/sqm dose groups, led to sepsis and death. The degree of leukopenia was fairly constant and predictable at each course in the same patient, but quite different among patients of the same dose group (Table 1).

Following the first toxic death, three further patients (besides the five planned) still entered the 15 mg/sqm dose group, without serious toxicity, but it was decided to close the recruitment following the second toxic death which occurred in the only patient treated with 18 mg/sqm.

Non-hematological toxicity was unremarkable, except for moderate hair loss in 4 patients (28%), while none of the patients developed grade 3 alopecia.

Four (34%) of 12 evaluable patients achieved a response, with 3 (one CR and 2 PR) of the 4 responses occurring in the lowest (12 mg/sqm) dose group.

Median response was 6 months. Median survival of all patients (9 uncensored) is 14.5 (range 1–28) months.

Conclusions

The results of this dose-finding pilot study are debatable. One positive aspect is that oral IDA and P produced responses in one-third of the patients with advanced MM and a high median age. The responses were unrelated to the IDA dosage and non-hematological side effects were low.

The chief drawback was the considerable and unpredictable hematologic toxicity: in some of the patients it was low while others experienced profound leukopenia, and there were two septic deaths. These were unexpected, since severe toxicity did not occur in other studies [1, 2] in which advanced MM were treated with cumulative dosages of IDA similar to those (36–54 mg/sqm/course) we employed.