Estimation of cancer risk due to exposure to lead contamination in Joss paper

Dear Editor,

Contamination of heavy metal is a big concern in public health. Contact with heavy metal might imply the cancer risk. Lead is the heavy metal that is widely mentioned for its contamination and relationship to cancer. In the recent publication, the risk due to contact of lead contaminated in Ayurveda product is reported.\(^1\) In real life, the contamination of lead can be seen in several objects. A forgotten object is Joss paper, which is widely used in Chinese communities around the world. The Joss paper is regularly used in religious practice by the Chinese and exposure to the lead on the Joss paper can be expected. According to a recent report, the level of lead contamination in each Joss paper is equal to 0.58–320.81 µg/g (ppm).\(^2\)

Here, the authors assess cancer risk from contact with lead contaminated Joss paper using the cancer risk assessment technique as used in the previous publication.\(^1\) In the present model, individual lifetime cancer risk is equal to “concentration of contaminated lead in Joss paper × lifetime unit risk factor.” As noted in the previous paper “unit risk factor of lead is equal to 1.2 ×10\(^{-3}\) m\(^3\)/µg” and “lead density equal to 11,340 kg/m\(^3\).”\(^1\)

According to this basic information, the derived individual lifetime cancer risk is equal to 6882.93–43655.82. This rate is considerable high comparing to the previously estimated rate in case of lead contaminated Ayurveda product.\(^1\) Since Joss
Dear Editor,

A rare presentation in a patient with gastric Adenocarcinoma: Carcinomatous meningitis as first sign of relapse

A 55-year-old man was diagnosed with Stage III gastric signet cell adenocarcinoma. After curative surgery in the form of total gastrectomy with Roux-en-Y esophagojejunostomy, he received adjuvant chemotherapy using epirubicin, oxaliplatin, capecitabine for 6 cycles. One year later, he presented with a 1 week history of headache and vertigo. On examination, he was afebrile, weak but alert, and oriented. Examination of the cranial nerves was normal, sensory, and motor examination was unremarkable. A diagnostic lumber puncture was performed and was negative. The patient was advised weekly triple intrathecal chemotherapy with methotrexate, chemotherapy along with cranial radiotherapy, was given the first dose of triple intrathecal chemotherapy with methotrexate, ara-C, and hydrocortisone along with best supportive care. He was lost to follow-up after the first dose and died at home about 4 weeks after discharge from the hospital (as ascertained from the patient’s relative by phone).

Examination of the cerebrospinal fluid (CSF) analysis showed white blood cell of 31 with 55% lymphocytes, 1% polymorphonuclear white cells, 36% atypical lymphocytes, and 1% monocytes. Protein was 120 mg/dL, and glucose was 85 mg/dL. Cytologic examination confirmed CSF involvement with adenocarcinoma cells, protein of 120 mg/dL, and glucose of 85 mg/dL. Cytologic examination revealed an opening pressure of 21 cm water. Cerebrospinal CSF examination showed white blood cell of 31 with 55% lymphocytes, 1% polymorphonuclear white cells, 36% atypical lymphocytes, and 1% monocytes. Protein was 120 mg/dL, and glucose was 85 mg/dL. Cytologic examination confirmed CSF involvement with adenocarcinoma cells, protein of 120 mg/dL, and glucose of 85 mg/dL. Cytologic examination of the cerebrospinal fluid showed numerous cells, comprising lymphocytes, occasional neutrophils, and macrophages such as large cells. These cells have multivacuolated cytoplasm and large nucleus, at places nuclear indentation is seen. Occasional cells show signet ring cell morphology. Histiocytic giant cells are seen. Mitotic activity is also noted. The large cells are positive for mucin stain. Cerebrospinal fluid is positive for mucin secreting poorly differentiated carcinoma. After curative surgery in the form of total gastrectomy with Roux-en-Y esophagojejunostomy, he received adjuvant chemotherapy using epirubicin, oxaliplatin, capecitabine for 6 cycles. One year later, he presented with a 1 week history of headache and vertigo. On examination, he was afebrile, weak but alert, and oriented. Examination of the cranial nerves was normal, sensory, and motor examination was unremarkable. A diagnostic lumber puncture was performed and was negative. The patient was advised weekly triple intrathecal chemotherapy with methotrexate, chemotherapy along with cranial radiotherapy, was given the first dose of triple intrathecal chemotherapy with methotrexate, ara-C, and hydrocortisone along with best supportive care. He was lost to follow-up after the first dose and died at home about 4 weeks after discharge from the hospital (as ascertained from the patient’s relative by phone).

Carcinomatous meningitis or leptomeningeal carcinomatosis (LMC) is defined as the infiltration of the pia mater and arachnoid membrane by malignant cells. LMC is an underdiagnosed complication of malignancy. It is estimated to occur in 0.16% of all cancer patients. The incidence of LMC is very rare. It is estimated to occur in 5–8% of cancer patients. LMC occurs in 78% of hematologic malignancies if central nervous system (CNS) directed treatment is not administered. LMC varies by the primary site of malignancy. LMC occurs in 25% of hematologic malignancies if central nervous system (CNS) directed treatment is not administered. LMC occurs in 25%, breast cancer (2–5%), and melanoma (up to 23%) as the most common. Gastric cancer complicated by LMC is less common in solid tumors, of which lung cancer (9–25%), breast cancer (2–5%), and melanoma (up to 23%) are the most common. Gastric cancer complicated by LMC is very rare.

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