

Initial publication

Salvage therapy of a patient with metastatic uterine leiomyosarcoma combining chemotherapy and hyperthermia

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Abstract

Uterine leiomyosarcomas in the metastatic phase are unfortunately still burdened with a short period of survival. In this paper, I present the case of Mrs. KP, 48 years old, which came to my observation with the widespread pre-treated disease. A personalized combination of chemotherapy and hyperthermia has made it possible to prolong survival and improve quality of life.

Introduction

Uterine leiomyosarcomas mainly affect young adult women. The disease has considerable biological aggressiveness and frequently tends to metastasize in the lung and bone [1]. However, it is difficult to obtain even a partial disease response after the second therapeutic line. Herewith I report a case of uterine leiomyosarcoma treated with chemo-thermotherapy after the fourth therapeutic line. The case shows a considerable partial remission in combination with a marked improvement in the quality of life and prolonged the expected survival time. The response period was eight months.

Case report

KP had a histological diagnosis, after bilateral hysterectomy, of high-grade uterine leiomyosarcoma. After adjuvant chemotherapy and a year's follow-up with no evidence of residual disease, a single lung lesion was revealed, which underwent surgical resection. Subsequently, the appearance of a vertebral lesion and new lung lesions led to the consideration of multimetastatic disease with the need for periodic systemic pharmacological treatment. After the fourth systemic antineoplastic treatment scheme she came to my observation to set up further personalized treatment. The clinical condition was skeletal and pulmonary metastases with obvious respiratory symptoms. The massive pulmonary metastasis with severe impairment of respiratory capacity was documented by CT and spirometry tests. The patient had been on oxygen support. I worked out a protocol for the fifth therapeutic salvage line. The patient received a combination of biweekly bevacizumab [2][3] with 3 mg/kg dose, together with a daily dose of 100 mg temozolomide [2][4][5] from the first to fifth day of the week. The chemoprotocol was combined with impedance coupled deep capacitive radio frequency hyperthermia (EHY2000, Germany) in alternating days of sessions duration of 55 minutes on the chest [6][7][8][9][10]. After three months, a CT test showed partial response (figure 1, 2, 3) with a reduction of the various disease-related complaints, considerable loss of symptoms, mainly the dyspnoea improved.

The applied complex treatment was well tolerated without noteworthy side effects and continued with disease response for eight months.

Discussion

A neoplastic form in the metastatic phase is certainly drastically could suppress survival. Leiomyosarcomas do not differ. Getting a disease response in a patient who has already received four treatment lines is a rare, great achievement. Generally, the most promising treatment lines are the first two, and most frequently, the neoplastic cells become resistant to the third line of the treatment. The combination of original and personalized medications showed synergy in this case with the treatment of deep capacitive radio frequency hyperthermia. This single success cannot define anything conclusive but can be a notable, interesting inspiration for further study.

Key words: uterine leiomyosarcoma, chemotherapy, oncological hyperthermia, rescue therapy

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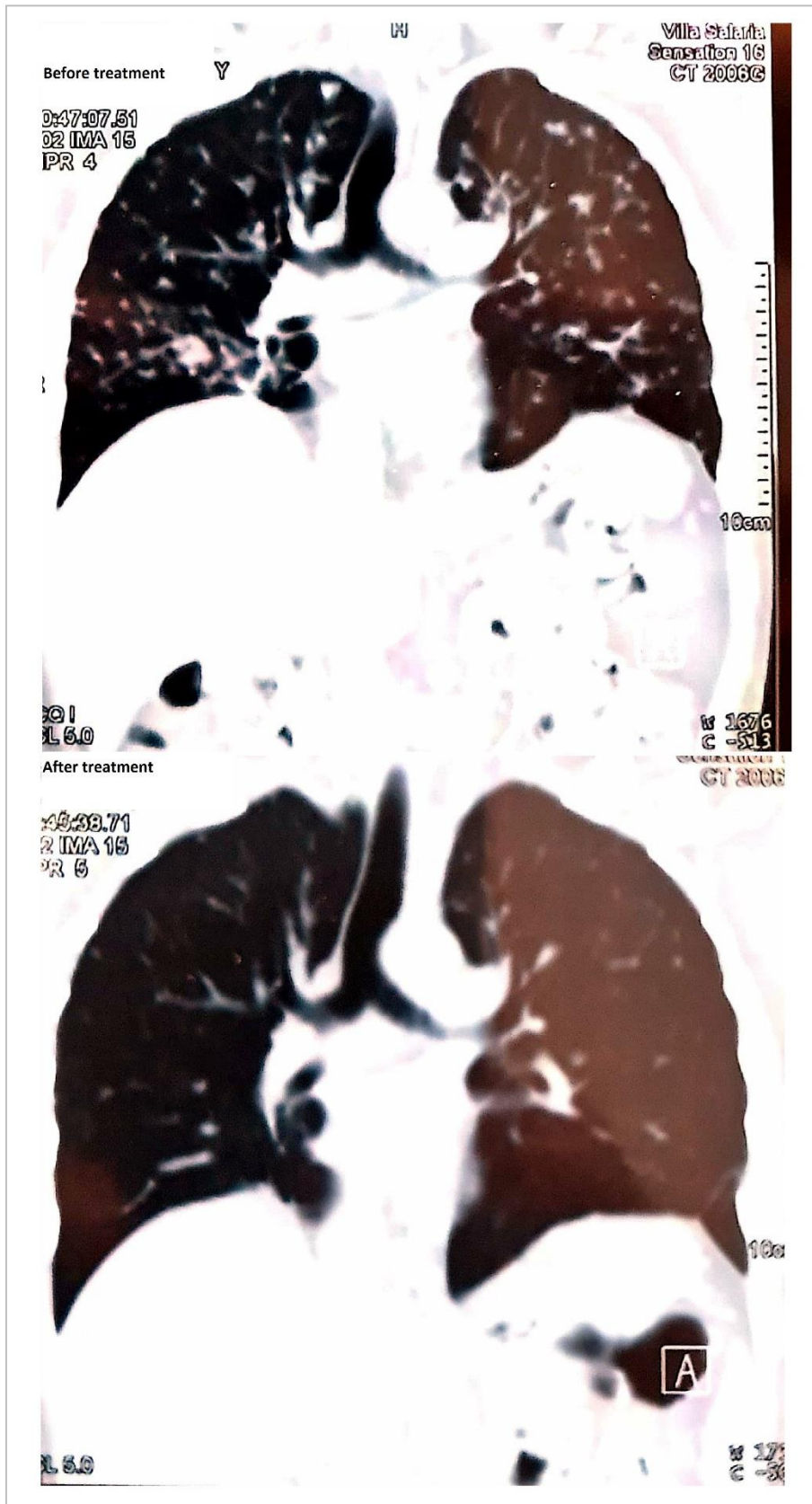


Figure 1

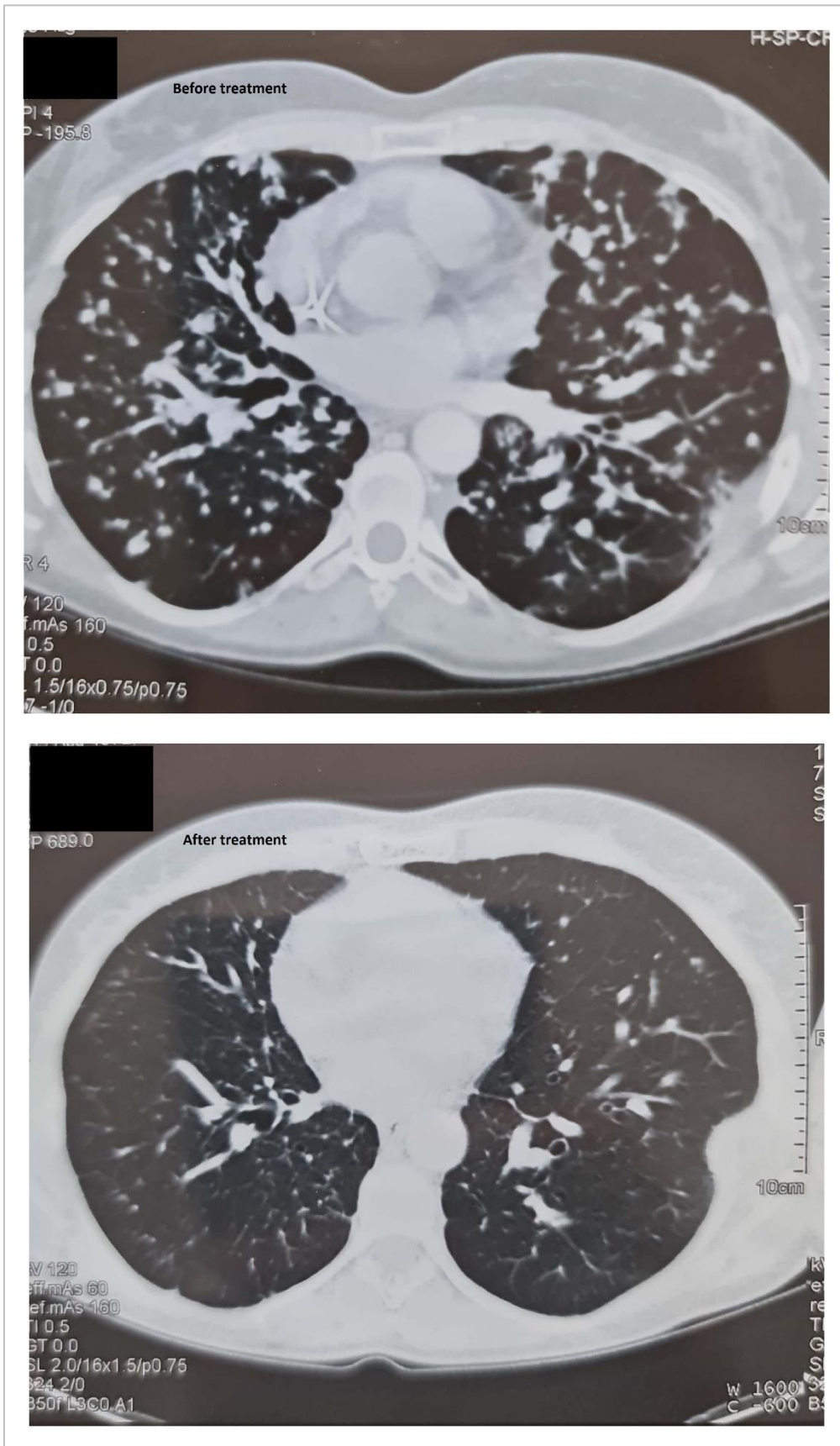
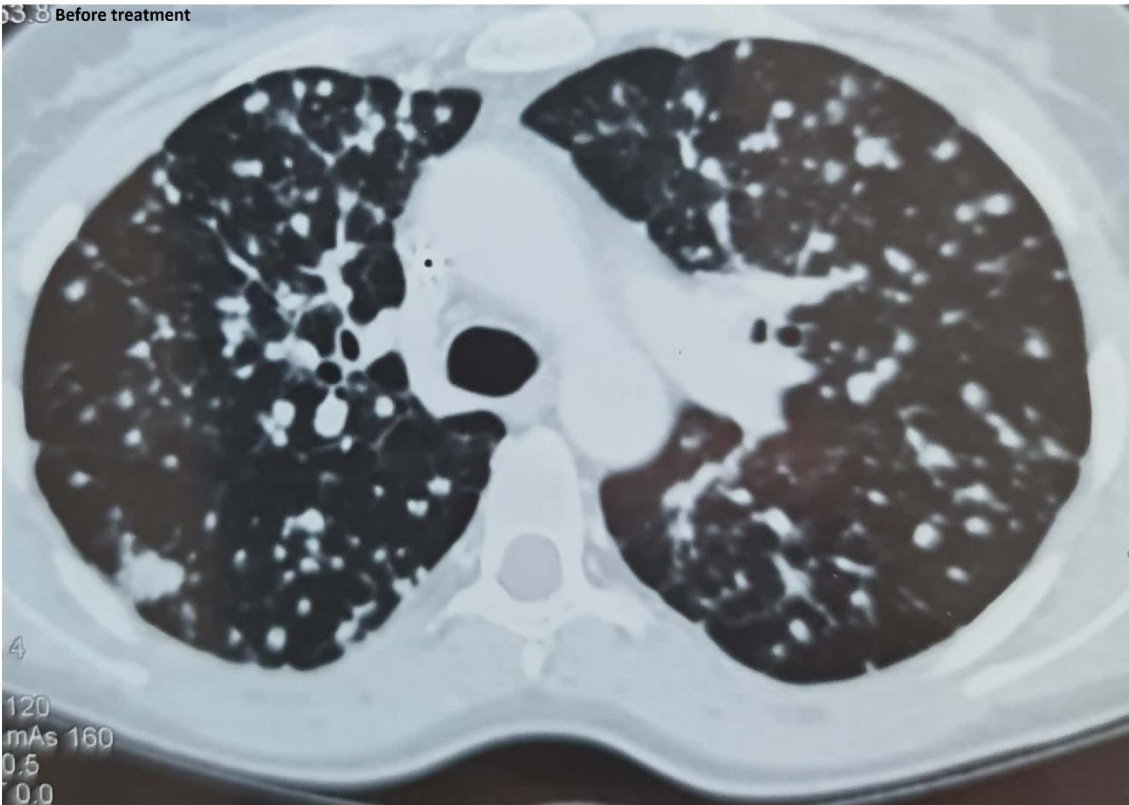


Figure 2

53.8 Before treatment



After treatment

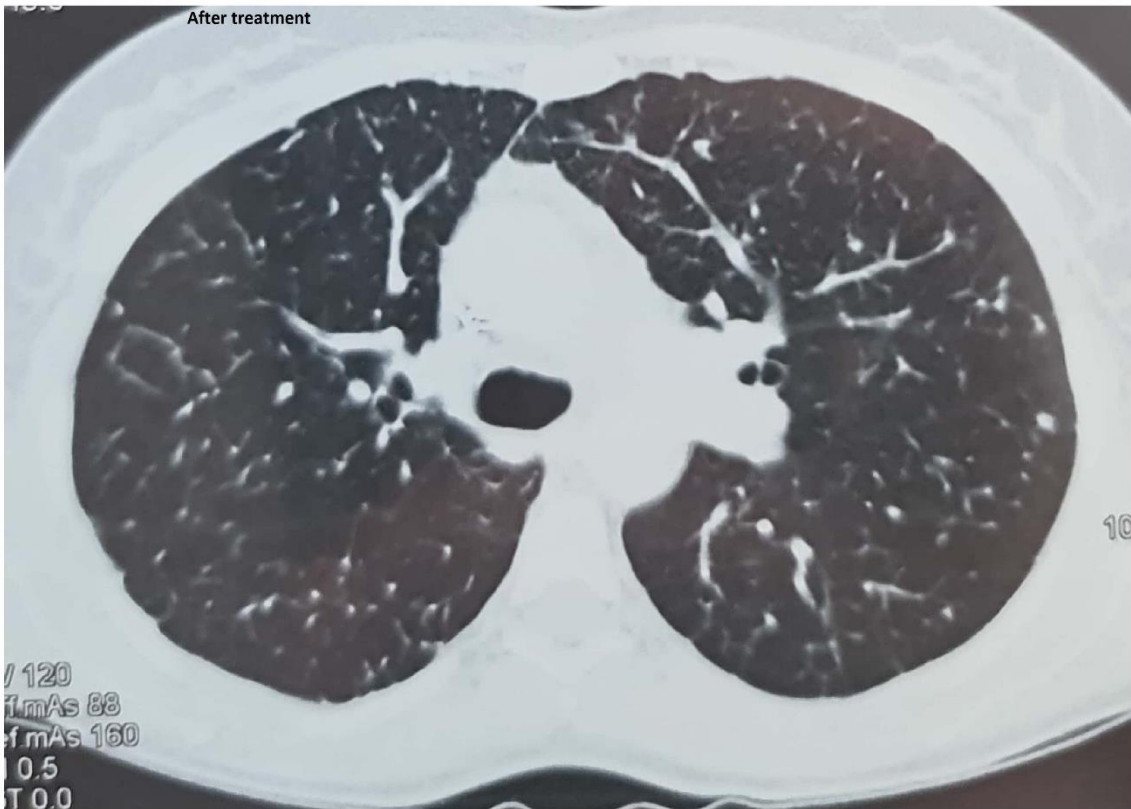


Figure 3