

# Multiple cranial nerve paralysis in a patient with recurrent rectal adenocarcinoma: Imminent cerebellar herniation

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## ABSTRACT

Rectal adenocarcinoma may spread to the central nervous system and may result in various symptomatology. Rectal adenocarcinoma presenting with multiple cranial nerve palsies has not been reported. A case of metastatic rectal adenocarcinoma with audio-visual complaints is presented. The therapeutic approach is discussed briefly. It is concluded that multiple cranial nerve palsies in a case with rectal adenocarcinoma herald brainstem metastasis, high risk of sudden death and need for immediate intervention appropriately. [Turk J Cancer 2007;37(2):72-73]

## KEY WORDS:

Rectal adenocarcinoma, audio-visual, brainstem, cranial nerve palsies

## INTRODUCTION

Virtually any primary cancer may spread to the central nervous system (CNS) with involvement of brain, spinal cord, dura, and/or pituitary gland (1). Rectal adenocarcinoma does certainly, but less frequently metastasize to CNS. Like other tumors arising from the pelvic cavity, it has a higher affinity to the posterior fossa (2). Rectal adenocarcinoma presenting with multiple cranial nerve palsies has not been reported yet.

## CASE REPORT

A 51-year-old male patient presented with complaints of proctalgia and rectal bleeding lasting for the last 2 years. Rectoscopy revealed an ulcero-vegetative mass at the 4<sup>th</sup> cm from the anal verge. Following the diagnosis of an adenocarcinoma on the pathological examination, low anterior resection was performed. On the definitive pathological analysis of the material; the tumor was found to invade the serosal surface, surgical margins were negative and lymph nodes were free of malignant involvement (Duke's B2).

Following the surgery, adjuvant chemotherapy consisting of fluorouracil (425 mg/m<sup>2</sup>) plus folinic acid (20 mg/m<sup>2</sup>) for 5 days every 4 weeks was started. After the 3<sup>rd</sup> cycle, pelvic chemo-radiotherapy was given, and then he received 3 more cycles, making a total of 6 cycles of chemotherapy.

Almost a year after the completion of adjuvant therapy, bilateral multiple pulmonary metastatic nodules appeared. The combination of fluorouracil and folinic acid was tried again, but the metastatic lesions did not respond.

One month later, he developed diplopia on looking to the left, deviation of the mouth to the left and a hearing loss together with tinnitus. On the neurological examination, the left eye was unable to turn up and outward down and there was a left-sided peripheral facial paralysis and hearing loss on the same side, making the diagnosis of left 4<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> cranial nerve palsies. The head and neck examination was normal. There was no mass in the nasopharyngeal area. Magnetic resonance imaging demonstrated multiple metastatic lesions in the right lateral bulbus, anterior pons, in the left trigon and in the 4<sup>th</sup> ventricle.

Dexamethasone 4x4 mg P.O. was started immediately and palliative radiotherapy at a total dose of 3000 cGy in 10 fractions was instituted. Diplopia regressed after the 7<sup>th</sup> fraction. Irinotecan 100 mg/m<sup>2</sup> once a week for 28 days with a 15-day rest was started following a 10-day rest after the radiotherapy. He died suddenly one month after discharge from the hospital.

## CONCLUSION

About 25% of all patients with malignancy have metastasis to brain or spinal cord, which brings a substantial morbidity and mortality. The incidence of central nervous system (CNS) metastases has been increasing, depending on the increase in the survival probability of the population due to the success in controlling disease outside of the CNS (1). The most common primary sites of metastatic CNS

tumors are lungs, breast cancer, malignant melanoma, leukemia and lymphoma, and renal cancer (1).

In colorectal cancer, the most common sites of metastasis are liver and lungs. Although the liver is the primary site of metastasis, rectal adenocarcinoma may develop extra-abdominal dissemination in 4% of cases skipping it due to inferior rectal vein collaterals (3,4). As proposed for some other tumors, the extra-abdominal metastasis of rectal carcinoma including CNS may be through Batson plexus, which has rich collaterals from the pelvis up to the skull (5).

In one study, the majority of the patients with brain metastasis have concomitant extracerebral metastasis especially in the lung as in our case (6). Once CNS involvement occurs, life expectancy dramatically diminishes: Only 16% of patients live longer than a year (6). Infratentorial localisation and multiple lesions define poorer prognosis (7). Whenever possible metastatectomy with or without radiotherapy seems to be the best treatment option prolonging the survival up to 6 months or more (6,7).

In our case, CNS involvement was both infratentorial and multiple. Surgical removal was impossible. As expected, his fate was grave. Although the presentation with multiple cranial nerve palsies is rare, it must be remembered that the clinical picture may herald brainstem metastasis and resultant possible cerebellar herniation. Therefore, corticosteroids and palliative radiotherapy must be started immediately.

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