



Isolated Abducens Nerve Palsy as a Result of Metastasis to the Clivus: A Unique Case Report

Sarah L. Warner, OMS-1, PA-C; Lake Erie College of Osteopathic Medicine- Seton Hill
Adnan Z. Solaiman, MD; Northern Light Eastern Maine Medical Center



Introduction

Colorectal cancer is the third most common cancer in both men and women in the United States. Local spread is common, although it can also spread via venous and lymphatic channels. The most common sites of metastasis are the liver, thorax and bone. Because it commonly spreads locally, surgical intervention is a common treatment for rectal cancer.

Skull base metastases, particularly to the clivus are uncommon. Clival tumors make up 0.18% of all intracranial tumors. The most common presenting symptom of clival metastasis is an isolated abducens nerve palsy. We present the case of a male with metastatic colon cancer with metastases to the liver, lung, spine and clivus, whose clival metastasis presented with an isolated cranial nerve VI palsy.

Case Report

- The patient is a 67-year-old Caucasian male with a 3-year history of rectal adenocarcinoma, who underwent surgical resection with ileostomy creation, radiation, and multiple chemotherapy regimens.
- Follow-up imaging showed progression of lesions in his liver, as well as new lesions on the T6 vertebral body. He was started on Regorafenib, but unfortunately developed progressively worsening back pain, numbness, and bilateral leg weakness. Neurosurgery was consulted and he was admitted to the hospital, where scans showed metastatic disease causing spinal cord compression at T6. He underwent T6 corpectomy, laminectomy, and fusion.

Case Report (continued)

- Postoperatively he was admitted to inpatient rehabilitation for a comprehensive spinal cord injury rehabilitation program for T8 AIS D spinal cord injury. After arriving at rehab, he developed diplopia and was found to have isolated abducens palsy. An MRI brain showed metastatic disease at the clivus and in the right occipital condyle.
- Once his incision healed, the patient was started on palliative radiation. After completing several sessions of radiation therapy the patient ultimately decided to stop treatment. He returned home with hospice care and expired within several weeks.

Discussion

- This case highlights a unique site of metastasis for rectal carcinoma. The patterns of metastasis due to rectal adenocarcinoma have been previously studied, with bony metastasis consisting of only 4% of metastasis sites.
- This case also emphasizes the importance of thorough physical examination in all patients who arrive to an acute inpatient rehabilitation facility, as new symptoms can arise as disease processes continue to progress

Discussion (continued)

- Lesions to the clivus make up only 0.18% of all intracranial tumors, and 0.42% of skull base tumors.
- Clival metastasis of rectal adenocarcinoma, presenting with isolated abducens palsy is a unique finding that has not been previously reported.
- This case also highlights the diverse venous drainage system to the rectum, and how venous spread can impact tumor metastasis. Venous drainage from the rectum is partially through the superior rectal vein, which is part of the portal venous system. There is also significant drainage from the inferior rectal veins, which are part of the caval system. Additionally, the internal vertebral plexus is also a site of distal rectal venous drainage.

Sources

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