

BRAIN METASTASIS OF CERVICAL CARCINOMA ABOUT A CASE AND LITERATURE REVIEW

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ABSTRACT

Brain metastases of cervical cancer are extremely rare. They are usually seen late in the clinical course and have poor prognosis. We report a case of a 45-year-old woman diagnosed with squamous cell carcinoma of the cervix and who developed supratentorial brain metastases after two years of treatment of the primary disease. The patient underwent surgical excision of the cerebral metastasis completed whole brain radiotherapy and palliative chemotherapy, with a good clinical and radiological evolution. **Resume:** Les m tastases c r brales du cancer du col ut rin sont extr mement rares. Leur pronostic reste sombre malgr  toutes les options th rapeutiques. Nous rapportons l'observation clinique d'une jeune patiente de 47 ans, suivie pour un carcinome  pidermoide du col ut rin, qui pr sente 2 ans plus tard des m tastases c r brales supratentorieilles. Notre patiente a b n fici  d'une r section chirurgicale compl t e par une radioth rapie enc phalique totale et une chimioth rapie palliative, avec une bonne  volution clinique et radiologique.

KEYWORDS: Brain metastasis-Uterine cervical cancer- Treatment – Prognosis.**INTRODUCTION**

Cervical cancer is characterized by locoregional extension, extra-pelvic metastases are rare, particularly at the brain level. The frequency of brain metastases of cervical carcinoma does not exceed 0.5 to 1.2%.

We report the observation of a young patient treated for cerebral metastasis of squamous cell carcinoma of the cervix while emphasizing the different epidemiological, clinical, radiological, therapeutic and evolutionary aspects of this unusual metastatic localization of cervical carcinoma.

Mots cl s: M tastase c r brale- Cancer du col ut rin - Traitement- Pronostic.

OBSERVATION

This is a 47-year-old patient with no specific pathological antecedents, treated in 2016 for stage IIB cervical squamous cell carcinoma, the patient the patient was treated by concomitant chemo-radiotherapy and uterovaginal brachytherapy. In February 2018, the patient consulted for headaches with visual disturbances and dizziness, without sensitivomotor deficit.

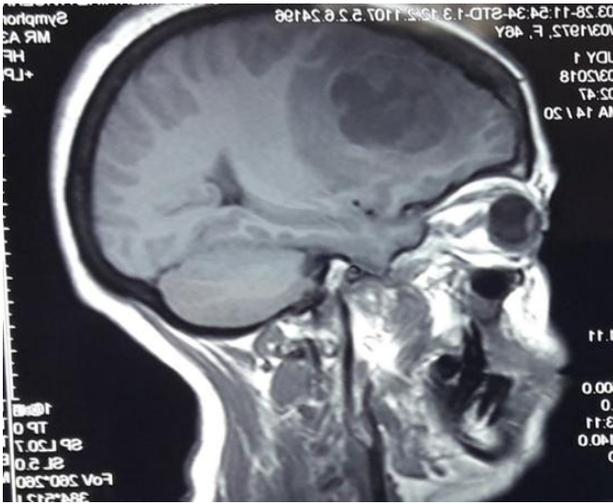
Cerebral MRI revealed a 5 cm left frontal tumor process, with a fleshy and cystic double tissue component, surrounded by vasogenic edema with with a commitment

under falcator, , associated with another small temporal nodular lesion process without any repercussions on the neighboring and medial structures suggesting secondary locations.

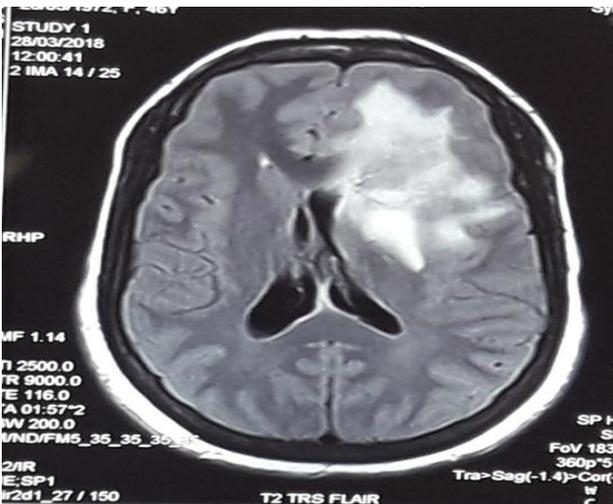
Thoraco pelvic abdominal CT scan requested looking for other secondary locations were without abnormalities.

The patient had a surgical excision of the left frontal process.

The anatomopathological study revealed a brain localization of a squamous carcinoma that is poorly differentiated and non-keratinizing, compatible with cervical metastases.



The patient received total brain radiotherapy at a dose of 30 Gy (10 fractions of 3Gy) and undergoing palliative chemotherapy: Cisplatin 50mg / m², paclitaxel 175 mg / m² and avastin 15mg / kg, with good clinical and radiological evolution.



Cerebral MRI (axial and sagittal section) showing a left frontal tumor process, surrounded by vasogenic edema with commitment under falx, associated with another small temporal nodular lesion process without any repercussions on neighboring structures.

DISCUSSION

Brain metastases of cervical carcinomas are extremely rare, as indicated by the small number of cases reported in the literature.^[1] Their frequency does not exceed 0.5 to 1.2% in the various series reported.^[2] The first case described in the literature is that of Henriksen,^[3] reported in 1949.

The metastatic dissemination pathway is haematogenous, mainly via the vertebral venous system.^[4,5] This dissemination depends on the patient's immune response, cerebral neovascularization, the number of vascular emboli and the characteristics of the tumor.^[2] Brain metastases usually occur in the sixth decade.^[6,7] These metastases are usually made from poorly differentiated

cervical carcinomas.^[3] This is the case of our patient. On the other hand, our patient was a much younger she was 47 years old. The interval between the initial diagnosis of cervical cancer and the occurrence of brain metastases varies considerably, from 8 weeks to 8 years.^[8] The diagnosis of cerebral metastasis in our case was made 24 months after the diagnosis of primary cancer.

The topographic diagnosis is essentially based on magnetic resonance imaging. Most brain metastases are supratentorial localization, which may be related to vascularization and spatial features of this region.^[2,7] They are usually unique and frequently sit at the frontal lobe.^[1,9]

However, multiple and subtemporal localizations have also been reported.^[10]

The symptoms are not specific, depend on the location of the brain process.^[5] Headache and hemiparesis are the most commonly reported symptoms.^[2] Nausea, vomiting, gait disturbances may also exist and should alert the clinician.^[2]

Brain metastases from cervical cancer usually occur in the context of polymetastatic neoplasia, especially in the lungs, liver and bone.^[2] However, isolated cerebral metastatic disease has already been described.^[11] This is the case of our patient.

There is no standard treatment for brain metastases of cervical cancer. The treatment depends on the location, the number of metastases, the presence of other secondary locations and the clinical status of the patient. Surgery has become an effective local treatment for these metastases.^[12] It is indicated in case of single lesion with the absence of other distant metastases.^[7,13] Surgical resection associated with radiotherapy results in better survival compared to radiotherapy alone. Radiosurgery and hypofractionated stereotaxic radiotherapy are currently recognized treatments for small and inaccessible brain metastases.^[14] As for palliative total encephalic radiotherapy is recommended in case of multiple or inoperable lesions.^[12]

Chemotherapy including cisplatin may be recommended as the first treatment for multiple brain metastases that are recurrent or associated with extra-cranial metastases.^[2,12]

The prognosis for cervical metastases of cervical cancer is generally poor despite all treatment options with a median survival that does not exceed a few months.^[1,6,15]

The prognosis depends on the patient's age, neurological status, clinical history, number of lesions, other extra-cranial metastases and co-morbidities.^[15]

CONCLUSION

The occurrence of a brain metastasis of cervical cancer is extremely rare, possible even after several years of remission. His prognosis remains poor. It requires a multimodal therapeutic approach, uses the skills of a multidisciplinary team and is based on surgery, radiotherapy and / or chemotherapy.

REFERENCES

1. Cordeiro JG, Prevedello DM, Ditzel LF, et al. Cerebral metastasis of cervical uterine cancer. Report of three cases. *Arq Neuropsiquiatr*, 2006; 64(2-A): 300-2.
2. Ikeda SI, Yamada T, Katsumata N, et al. Cerebral metastasis in patients with uterine cervical cancer. *Jpn J Clin Oncol*, 2005; 28: 27-9.
3. Henriksen E. The lymphatic spread of carcinoma of the cervix and of the body of the uterus. a study of 420 necropsies. *Am J Obstet Gynecol*, 1949 Nov; 58(5): 924-42. PubMed| Google Scholar.
4. Weed JC Jr, Graff AT, Shoup B, Tawfik O. Small cell undifferentiated (neuroendocrine) carcinoma of the uterine cervix. *J Am Coll Surg*, 2003 Jul; 197(1): 44-51. PubMed| Google Scholar.
5. Chura JC, Shukla K, Argenta PA. Brain metastasis from cervical carcinoma. *Int J Gynecol Cancer*, 2007 Jan-Feb; 17(1): 141-6. PubMed| Google Scholar.
6. Agrawal A, Kumar A, Sinha A K, Kumar M, Pandey S R, Khaniya S. Intracranial metastases from carcinoma of the cervix. *Singapore Med J.*, 2007; 48(5): e154. PubMed| Google Schola
7. Cormio G, Pellegrino A, Landoni F, Regallo M et al. Brain metastases from cervical carcinoma. *Tumori*, 1996 Jul- Aug; 82(4): 394-6. PubMed| Google Scholar
8. Peters P, Bandi H, Efendy J, Perez-Smith A, Olson S. Rapid growth of cervical cancer metastasis in the brain. *J Clin Neurosci*, 2010 Sep; 17(9): 1211-2. doi: 10.1016/j.jocn.2010.01.021. PubMed| Google Scholar.
9. Kumar L, Tanwar RK, Singh SP Intracranial metastasis from carcinoma cervix and review of literature. *Gynecol Oncol*, 1992; 46: 391-2.
10. Viswanathan AN, Deavers MT, Jhingran A *et al.* Small cell neuroendocrine carcinoma of the cervix: Outcome and patterns of recurrence. *Gynecol Oncol*, 2004; 93: 27-33.
11. Dadlani R, Ghosal N, Hegde AS. Solitary cerebellous metastasis after prolonged remission in a case of uterine cervical adenocarcinoma. *J Neurosci Rural Pract*, 2012; 3(2): 185-7. PubMed| Google Scholar
12. Hwang JH, Yoo HJ, Lim MC, Seo SS, Kang S, Kim JY et al. Brain metastasis in patients with uterine cervical cancer. *J Obstet Gynaecol Res.*, 2013 Jan; 39(1): 287-91. doi: 10.1111/j.1447-0756.2012.01927.x. PubMed| Google Scholar.
13. Amita M, Sudeep G, Rekha W, Yogesh K, Hemant T. Brain metastasis from cervical carcinoma: a case report. *MedGenMed*, 2005 Jan 5; 7(1): 26. PubMed| Google Scholar
14. Park SH, Ro DY, Park BJ, Kim YW, Kim TE, Jung JK et al. Brain metastasis from uterine cervical cancer. *J Obstet Gynaecol Res.*, 2010 Jun; 36(3): 701-4. doi: 10.1111/j.1447-0756.2010.01219.x. PubMed| Google Scholar
15. Robinson JB, Morris M Cervical carcinoma metastatic to the brain. *Gynecol Oncol*, 1997; 66: 324-6.