

A rare metastatic region of cervix cancer; the brain

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Abstract

Cervical cancer is a frequent malignancy of the females. It still remains a leading cause of cancer-related death in women world wide. Cervical cancers do not always spread, but those that do most often spread to the lungs, liver, bladder, and vagina.

We report a 67-year-old woman with squamous cell carcinoma of cervix that could not receive chemo-radio therapy due to mesenteric involvement. A 25 mm mass was detected in the magnetic resonance examination which was performed due to persistent headache. Diffusion magnetic resonance revealed non-contrasted mass consistent with metastases. The patient received palliative radiotherapy at 3000 cGy.

Brain scans can be beneficial for metastasis detection if there is presence of significant symptoms at cervical cancer.

Keywords: Cervix cancer, Metastasis, Brain involvement, Radiotherapy.

Introduction

Cervical cancer still remains a leading cause of cancer-related deaths for women world wide.¹ Once the cervical cancer becomes invasive, it can spread locally to the upper vagina and into the adjacent organs such as pelvic sidewall, bladder, rectum etc. by lymphatics and to the pelvic and para-aortic lymph nodes. It also spreads to distant organs via haematological route.^{2,3} Most often it spreads to the lung, supraclavicular lymph nodes, liver, and bones as distant metastasis.³ Metastasis to the brain from cervical carcinoma is rarely reported in the literature.²⁻⁴

Case Report

A 67-year-old patient was diagnosed with FIGO stage IV squamous cell carcinoma of the cervix in June 2011. She could not receive chemo-radio therapy due to mesenteric involvement seen in computed tomography at initial diagnosis. Six cycles of Paclitaxel/Carboplatin chemotherapy were given. Abdominal mass regressed in computed tomography scan after chemotherapy. Patient was admitted to oncology clinic with complaint of severe headache. Cerebral magnetic resonance (MR) imaging was used for cerebral scanning. A 25mm mass with 13 mm solid component was seen in the field of view. It localized in the left temporal lobe was seen as hypointense on T1A images and hyperintense T2A images with central cystic necrotic areas (Figure-1, 2).

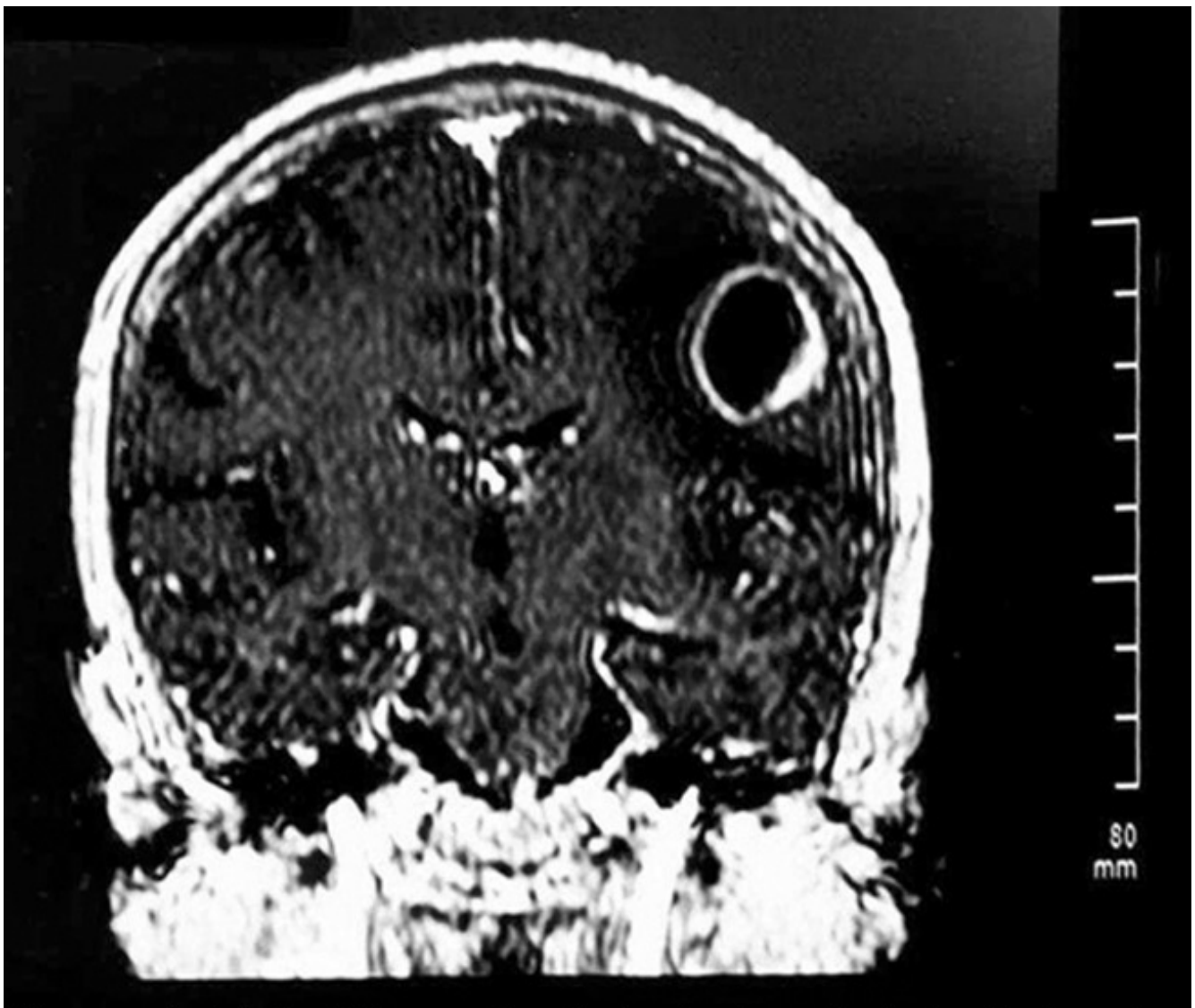


Figure-1: MRI of the patient's brain (sagittal view) showing a metastasis in the left temporal region.

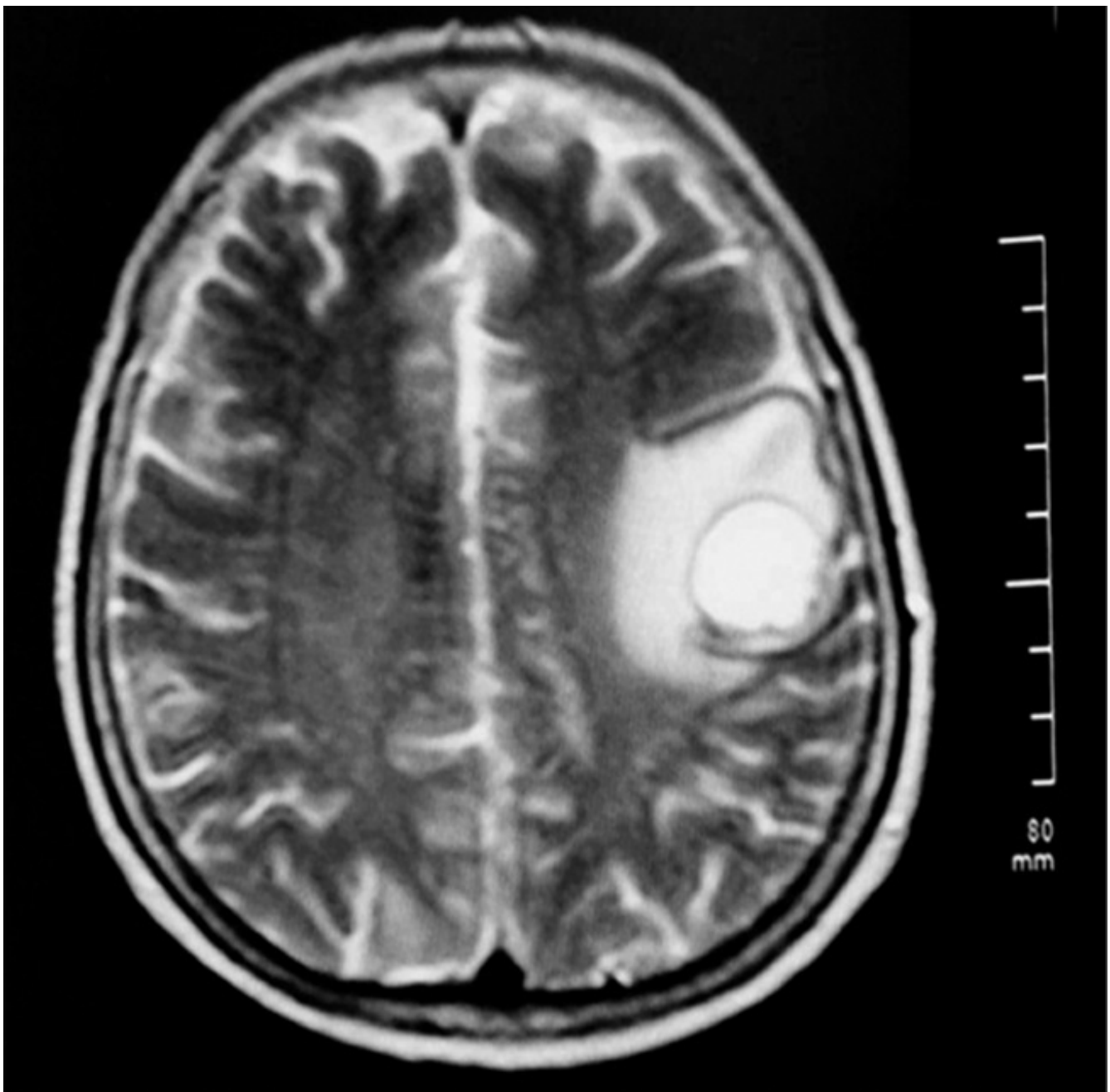


Figure-2: MRI of the patient's brain showing a hyperintense metastasis in the left temporal region.

After intravenous contrast injection, contrast uptake was observed in peripheral field. Remarkable diffusion restriction was not observed in diffusion scans. Obtained views were interpreted as metastatic lesion of cervical cancer. 3000 cGy palliative radiotherapy was performed in total intracranial field.

Discussion

Cancer of cervix is one of the universal problems that is responsible for women mortalities. It is the third most common cancer in developing countries with 529.800 cases and fourth common reason of female deaths 275.100 according to recent reports.^{1,5} It is therefore important to understand the disease

behaviour along with the preventive, diagnostic and treatment strategies for management of this malignancy.

Cervix cancers spread by the following routes: to the ovary, direct extension to adjacent organs, lymphatic metastasis, haematogenous spread, and transtubal implantation.⁶ It most often spreads to the lung, supraclavicular lymph nodes, liver, and bones as distant metastasis.³ Intracranial metastasis is unusual.²⁻⁴ Kumar et al reported of 2 brain metastatic cases among 481 patients with cervical cancer.⁴ Nagar et al. reported on a 72 year old woman with cervix cancer at FIGO stage IIA who was diagnosed with a metastatic brain lesion. Palliative radiotherapy was given to this case.² Agrawal et al. presented a 49 year old female with intracranial cervix carcinoma metastasis. Surgical removal was performed based on the theory that treatment strategies should be focused mainly on palliative care but in some cases intervention is done for symptomatic relief and improvement in the quality of life.³ A 54-year-old woman with isolated left parietooccipital lobe metastasis of cervix carcinoma was reported by Amita et al.⁷ Despite the poor prognosis in general reviews, they reported a good result with surgical resection and postoperative radiotherapy.⁷ Cordeiro et al had three cases of cervical cancer who presented with metastatic brain lesions. Adjuvant whole brain radiotherapy was applied the prognosis was poor.⁸

Conclusion

Although rare but cervix cancer can spread to the intracranial region. Literature reports that brain metastasis of carcinoma of cervix are usually encountered in advanced stages of malignancy and have a poor prognosis. The treatment strategies should be individualized to provide symptomatic relief and improve the quality of life.

References

1. Narayan G, Arias-Pulido H, Koul S, Vargas H, Zhang FF, Vilella J, et al. Frequent promoter methylation of CDH1, DAPK, RARB, and HIC1 genes in carcinoma of cervix uteri: its relationship to clinical outcome. *Mol Cancer* 2003; 2: 24.
2. Nagar YS, Shah N, Rawat S, Kataria T. Intracranial metastases from adenocarcinoma of cervix: a case report. *Int J Gynecol Cancer* 2005; 15: 561-3
3. Agrawal A, Kumar A, Sinha AK, Kumar M, Pandey SR, Khaniya S. Intracranial metastases from carcinoma of the cervix. *Singapore Med J* 2007; 48: 154-6.
4. Kumar L, Tanwar RK, Singh SP. Intracranial metastases from carcinoma cervix and review of literature. *Gynecol Oncol* 1992; 46: 391-2.
5. Jemal A, Bray F, Center MM, Ferlay J, Ward E, Forman D. Global cancer statistics. *CA Cancer J Clin* 2011;61: 69-90.
6. Wu HS, Yen MS, Lai CR, Ng HT. Ovarian metastasis from cervical carcinoma *Int J Gynaecol Obstet* 1997; 57: 173-8.
7. Amita M, Sudeep G, Rekha W, Yogesh K, Hemant T. Brain metastasis from cervical carcinoma--a case report. *Med Gen Med* 2005; 7: 26.
8. Cordeiro JG, Prevedello DM, da Silva Ditzel LF, Pereira CU, Araújo JC. Cerebral metastasis of cervical uterine cancer: report of three cases. *Arq Neuropsiquiatr* 2006; 64(2A): 300-2.