CASE REPORT

Oral metastases from carcinoma of cervix

Hari Ram,¹ Manoj Kumar,² M L B Bhatt,³ Mohammad Shadab¹

¹Department of Oral and Maxillofacial Surgery, King George's Medical University, Lucknow, Uttar Pradesh, India
²Department of Radiodiagnosis, King George's Medical University, Lucknow, Uttar Pradesh, India
³Department of Radiotherapy, King George's Medical University, Uttar Pradesh, India

Correspondence to
 Dr Manoj Kumar,
 docmdeo@gmail.com

SUMMARY

Metastatic tumours of the oral cavity are uncommon, they may occur in soft tissue as well as in bone in the oropharyngeal region. Owing to its rarity, metastatic tumours of the oral regions are a challenge to diagnose. We report a case of metastasis of the oral cavity, arising from uterine cervix mimicking as mucoepidermoid carcinoma. The metastatic lesions were noticed in the soft tissue of the lower buccal and gingival side of a oral cavity, in a 40-year-old woman with history of an adenosquamous carcinoma of uterine cervix treated by panhysterectomy.

BACKGROUND

Metastases of the oral cavity from the female genital tract has previously been reported. However, we could not find any cases of an adenosquamous carcinoma of uterine cervix metastasising to the oral cavity.

CASE PRESENTATION

A 40-year-old woman underwent panhysterectomy about 6 months previously for carcinoma of uterine cervix, stage IB2 (FIGO staging) and she was advised to undergo radiotherapy. She presented to the outpatient department of oral and maxillofacial surgery with complaint of mass lesions in oral cavity for last 2 months, which were progressively increasing in size. On examination a swelling of 3×2 cm in size was found to be present on the left side of buccal vestibule adjacent to second premolar and first molar teeth. Another smaller lesion was also noticed in gingival side of the oral cavity adjacent to right lower canine tooth. These swelling were smooth in outline, non-tender, rubbery, firm in consistency and non-pulsatile. Surface epithelium of the swelling was intact with no ulceration, no prominent vein, discolouration or fixity to bone. There was no palpable regional lymphadenopathy.

Gynaecological examination including per speculum, per vaginal and Pap smear from the vault was found to be normal except postoperative changes. MRI scans showed focal T2 abnormal signal intensity lesion in the buccal surface of oral mucosa adjacent to left lower second premolar and first molar teeth infiltrating the adjacent bone (figure 1). Another small lesion was seen on gingival side of oral cavity adjacent to right lower canine tooth. These lesions were hyperintense on T2-weighted and hypointense on T1-weighted images (figure 2). After routine investigations, incisional biopsy of the lesions was performed.

On histopathological examination, the tumour of uterine cervix showed both glandular mucous secreting component as well as malignant

Figure 1 Coloured photograph of the lesion showing focal nodular mass lesion in buccal surface of oral mucosa opposite to left lower second premolar and first molar (white arrow) and another smaller mass lesion in gingival mucosa opposite to lower right canine tooth (black arrow).

squamous component (figure 3). Possibility of mucoepidermoid carcinoma arising from minor salivary gland was considered for oral lesions. However, in view of the history of cervical cancer, slides from both sites were reviewed and morphology was found to be similar (figure 4).

Clinicoradiological diagnosis of carcinoma uterine cervix with metastatic spread to oral cavity was made which was confirmed by histopathological findings. Thorough clinical examination and radiological investigations did not reveal any other metastatic lesion in the body.

Figure 2 MRI of oropharyngeal region showing focal abnormal signal intensity mass lesion on buccal surface of oral mucosa opposite to left second premolar and first molar (black arrow) and another smaller mass lesion in gingival mucosa opposite to lower right canine tooth (white arrow).

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Figure 3 Microphotograph of cervical lesion showing an infiltrating adenocarcinoma and malignant squamous cells.

INVESTIGATIONS

- ▶ Ultrasonography of whole abdomen.
- ▶ Chest skiagram posteroanterior view.
- ▶ MRI of oropharyngeal region.
- ▶ Histopathology of the mass lesions of oral cavity and uterine cervix.

DIFFERENTIAL DIAGNOSIS

Mucoepidermoid carcinoma arising from minor salivary gland.

TREATMENT

Therapeutic intervention in the form of combination chemotherapy for the patient was undertaken. Combination in the form of injection paclitaxel, injection cisplatin and injection 5-fluorouracil was started. After first cycle, there was marked reduction in size of the oral cavity mass lesions. The patient was given three cycles of chemotherapy with complete response in the oral mass lesions. Knowing fact that response to chemotherapy in such histology is always short-lived, a course of palliative radiotherapy to lower gingiva by two wedge fields with one anterior and one lateral field up to a dose of 30 Gy in 2 weeks by five fractions per week with 2 cm wide margin was given.

Earlier a dose of 50 Gy in 25 fractions by anteroposterior and posteroanterior fields to whole pelvis was also given following surgery. It was followed by brachytherapy to a dose of 18 Gy in three fractions using 6 Gy per fraction at weekly interval at the vault.

Figure 4 Section from the oral metastases showing a tumour with a similar dual morphology (H&E×125×digital magnification).

OUTCOME AND FOLLOW-UP

The patient was tumour free after 1 year following the start of the treatment.

DISCUSSION

Metastatic tumours to the oral cavity are uncommon. These metastases most commonly present as lesions of the jaw bones, the mandible being the most common site. Soft tissue involvement was evident only in 6 of the 24 cases as reported by Vander Waal *et al*¹ Our patient presented primarily with soft tissue lesions in the oral cavity. Mass lesion arising from buccal mucosa was infiltrating the bony cortex of the mandible.

The clinical presentation of oral metastases varies from local swelling or pain to paraesthesia. Most patients have swelling of the mandible with local tenderness. Metastases in the jaw bones are usually seen as radiolucent areas in radiographs.¹

Race has not been studied as a factor in the metastatic process in the oral region; however, variation can occur in different parts of the world, depending on the local prevalence of a particular malignant tumour.² In India cancer cervix is the most common cancer in women.³

The male-to-female ratio is almost equal for metastatic neoplasms of the oral cavity; however, sites within the oral cavity differ. For the jawbones, the male-to-female ratio is 1:1.1; for the oral mucosa the ratio is 2:1. In female patients, the most common primary cancers that metastasise in the oral region are those from the breasts, followed with much lower frequency by the female genital organs, colo-rectal, bone and kidneys.⁴ However, we could not find any report of metastases from an adenosquamous carcinoma of the cervix metastasising to the oral cavity.

The incidence of cervical adenosquamous carcinoma is lower than those of other types of cervical cancer. Yasuda *et al*⁵ reported that adenosquamous carcinoma accounted for 5–10% of cervical cancer whereas Meng *et al*⁶ accounted for 2.4% of cervical cancer and its incidence is low.

Risk of developing the distant metastasis from carcinoma of cervix depends on the presence of various poor prognostic features, such as advanced stage, endometrial extension and local failure. Apart from local spread, the disease goes to the pelvic and para-aortic lymph nodes. The risk of ovarian metastases in cervical adenocarcinoma is known⁷ and seems higher than squamous cell carcinoma. By haematogenous route tumours may show distant spread to supra diaphragmatic and infra diaphragmatic viscera, that is, lungs and liver. The most common primary sites are breast, lungs, kidney and prostate. Rare primary sites are cerebellum, colon and oesophagus. The frequency of bone metastasis is less, occurring in 0.8–23% cases.⁸ Osseous metastasis from cervical cancer has been reported in all axial and peripheral bones. Vertebrae, followed by pelvic bones, are the most common sites of skeletal metastasis. Spread to distal sites such as femur and skull, is considered to be haematogenous route.⁹ Skin metastasis from carcinoma of the uterine cervix is rare and incidence ranges from 0.1–2%.¹⁰ The main sites of cutaneous metastasis are the abdominal wall or lower extremities.¹¹ The usual mode of spread in carcinomas of the cervix has been suggested to be the lymphatic system.¹² However, in our case it appears to be a haematogenous spread. During diagnosis, adenocarcinoma of cervix tends to be larger and exhibit a propensity for early lymphatic and haematogenous metastasis.¹³ It is interesting to note in our case that both the adenocarcinoma and the malignant squamous component of the tumour had metastasised.

Radical hysterectomy or radiotherapy is the standard treatment for early cervical carcinoma beyond stage IA1 and produces good survival results. Nevertheless, both treatments inherently cause sterility and associated with relevant morbidity.¹⁴ Systemic treatment in patient with advanced disease is palliative. Cisplatin is the single most active agent for treatment of cervical cancer. Palliative radiation is useful for control of symptoms in advance stage.¹⁵

Most patients who present with a metastatic tumour in the oral cavity have also developed metastases at other sites, so a palliative systemic regimen is the only management option. Local treatment of jaw bone metastases by radiotherapy relieves pain and may prevent loss of function. Metastases in the soft oral tissues may more readily be approached surgically, with similar palliative results for the patient.¹

Dos Reis *et al*¹⁶ reported no significant difference in recurrence rate between adenosquamous carcinoma and adenocarcinoma as well as squamous carcinoma of the uterine cervix. There was no statistical difference in recurrence rate and time to recurrence between adenosquamous carcinoma and adenocarcinoma.² In our case the primary lesion has not recurred.

Histological evaluation of oral metastases is critical because the morphology of a fair number of primary lesions may mimic that of metastases. In our case, differential diagnosis of mucoepidermoid carcinoma was considered since this tumour arises from the salivary glands and has both adenocarcinoma and malignant squamous cell components. Similarly, metastasis from ductal carcinoma breast is to be distinguished from ductal carcinoma of the salivary glands, squamous cell carcinoma metastasis from primary squamous cell carcinoma of the oral cavity. Genetic profiling and messenger RNA studies can help to match primary and secondary lesions.¹⁷ However, this requires primary tumour tissue as well as research lab facilities. In clinical practice matching the histological features of the primary and secondary lesions is generally performed.

Learning points

- ▶ An adenosquamous carcinoma of uterine cervix metastasising to the oral cavity is a rare entity.
- ▶ Both the adeno and squamous component of the malignant tumour had metastasised in this case.
- ▶ To the best of our knowledge, this is the first report of this kind of presentation.

Contributors All authors were involved in the management of patient. All authors were also involved in the drafting of the article.

Competing interests None.

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REFERENCES

- 1 Van der Waal RI, Buter J, van der Waal I. Oral metastases: report of 24 cases. *Br J Oral Maxillofac Surg* 2003;41:3–6.
- 2 Shen ML, Kang J, Wen YL, *et al*. Metastatic tumors to the oral and maxillofacial region: a retrospective study of 19 cases in West China and review of the Chinese and English literature. *J Oral Maxillofac Surg* 2009;67:718–37.
- 3 Consolidated Report of Population based Cancer Registries 2001–2004. Bangalore: ICMR, 2006. National Cancer Registry Program. <http://www.ncrpindia.org> (20 Aug 2010).
- 4 Hirshberg A, Shnaiderman-Shapiro A, Kaplan I, *et al*. Metastatic tumours to the oral cavity—pathogenesis and analysis of 673 cases. *Oral Oncol* 2008;44:743–52.
- 5 Yasuda S, Kojima A, Maeno Y, *et al*. Poor prognosis of patients with stage Ib1 adenosquamous cell carcinoma of the uterine cervix with pelvic lymph node metastasis. *Kobe J Med Sci* 2006;52:9–15.
- 6 Meng Y, Li S, Hu T, *et al*. Clinical analysis of 132 cases of cervical adenosquamous carcinoma and cervical adenocarcinoma. *Chin J Cancer* 2010;29:15–19.
- 7 Tabata M, Ichinoe K, Sakuragi N, *et al*. Incidence of ovarian metastasis in patients with cancer of the uterine cervix. *Gynecol Oncol* 1987;28:255–61.
- 8 Agarwal U, Dahiya P, Chauhan A, *et al*. Scalp metastasis in carcinoma of the uterine cervix—a rare entity. *Gynecol Oncol* 2002;87:310–12.
- 9 Ratanatharathorn V, Powers WE, Steversen N, *et al*. Bone metastasis from cervical cancer. *Cancer* 1994;73:2372–9.
- 10 Brady LW, O'Neil EA, Farber SH. Unusual sites of metastases. *Semin Oncol* 1977;4:59–64.
- 11 Hayes AG, Berry AD. Cutaneous metastasis from squamous cell carcinoma of the cervix. *J Am Acad Dermatol* 1992;26:849–50.
- 12 Daw E, Riley S. Umbilical metastasis from squamous carcinoma of the cervix. Case report. *Br J Obstet Gynecol* 1982;89:1066.
- 13 Wharton V. Neoplasms of the cervix. In: Holland JF, Frei E III, Bast RC Jr, Kufe DW, Morton DL, Weichselbaum RR, eds. *Cancer medicine*. Vol. II. 4th edn. Toronto: Williams & Wilkins, 1995:2227–61.
- 14 Landoni F, Maneo A, Colombo A, *et al*. Randomised study of radical surgery versus radiotherapy for stage Ib–IIa cervical cancer. *Lancet* 1997;350:535–40.
- 15 Spanos WJ Jr, Pajak TJ, Emami B, *et al*. Radiation palliation of cervical cancer. *J Natl Cancer Inst* 1996;21:127–30.
- 16 Dos Reis R, Frumovitz M, Milam MR, *et al*. Adenosquamous carcinoma versus adenocarcinoma in early-stage cervical cancer patients undergoing radical hysterectomy: an outcomes analysis. *Gynecol Oncol* 2007;107:458–63.
- 17 Rosenfeld N, Aharonov R, Meiri E, *et al*. MicroRNAs accurately identify cancer tissue origin. *Nat Biotechnol* 2008;26:462–9.

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