

METASTATIC GALLBLADDER CANCER PRESENTING AS A GINGIVAL TUMOR AND DEEP NECK INFECTION

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Gallbladder cancer has an extremely poor prognosis because it is often diagnosed at an advanced stage. We describe a 63-year-old woman who was treated 4 years previously for gallbladder cancer, with laparoscopic cholecystectomy and secondary hepatectomy after presenting with acute cholecystitis and gallbladder rupture. At her second presentation, she had a left lower gingival tumor and deep neck infection. Incision and drainage and tumor biopsies were performed, and pathology at both sites revealed adenocarcinoma. Positron emission tomography revealed other tumors in the left breast and left lower lung field, which were both proven to be adenocarcinoma by biopsy. The patient's presentation with a metastatic oral tumor was rare. Although the incidence is very low, physicians should consider the possibility of metastatic cancer in a patient with a history of cancer, who presents with new oral tumor or deep neck infection.

Key Words: gallbladder cancer, gingival tumor, metastatic neoplasm, neck infection
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Gallbladder cancer is relatively rare and it is the fifth most common neoplasm of the gastrointestinal tract. High mortality (5-year survival is ~5%) is partly the result of nonspecific presentation and diagnosis at an advanced stage [1,2]. The most common metastatic lesions are in the liver, common bile duct, and pancreas [3]. It is very rare for gallbladder cancer to spread to the oral region. Deep neck infection as the main initial presentation of primary head and neck cancer is very rare [4]. To the best of our knowledge, no case of deep neck infection associated with undiagnosed metastasis has been reported with a non-head and neck cancer. We report our experience with a woman with a history of gallbladder cancer whose new metastatic disease presented as gingival tumor and deep neck infection.

CASE PRESENTATION

A 63-year-old woman with dementia had undergone laparoscopic cholecystectomy and secondary hepatectomy at our hospital in February 2005 for gallbladder cancer that presented with acute cholecystitis and gallbladder rupture. The adenocarcinoma was staged as T3N0M0, stage IIa. She was lost to follow-up without receiving further treatment such as adjuvant radiotherapy or chemotherapy. She presented to the emergency department in May 2009 for acutely progressive left neck swelling and fever up to 38.2°C. Physical examination showed severe tenderness, swelling, and erythema of the left neck. Fine needle aspiration was performed, which produced a turbid discharge. Blood tests showed an elevated white blood cell count of $11.46 \times 10^9/L$ and an elevated C-reactive protein level of 18.57 mg/dL. Other results were within normal limits. Head and neck computed tomography revealed a cystic necrotic lesion along the left parapharyngeal space (Figure 1). Under the impression of deep neck infection, emergency incision and drainage were performed. Wound culture of the neck abscess revealed



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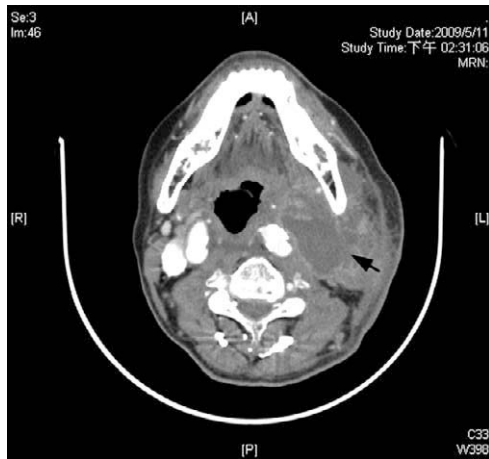


Figure 1. Computed tomography showed a cystic necrotic lesion with rim enhancement in the left parapharyngeal space.

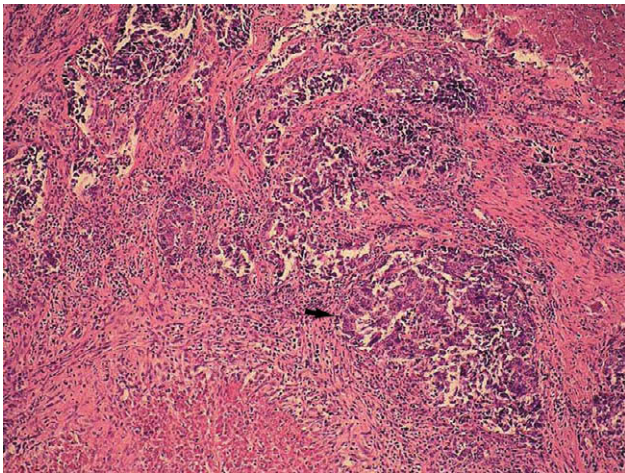


Figure 2. Histopathology of the biopsy specimen obtained from the gingival lesion revealed adenocarcinoma (arrow) that was compatible with a primary gallbladder tumor (hematoxylin and eosin stain).

Prevotella melaninogenica. Some necrotic tissue was sent for pathological examination at the same time. Postoperatively, a round, left lower gingival tumor that measured 2.0×2.0cm was found at otorhinolaryngological examination. The patient had no idea when the tumor had developed. Incisional biopsy was performed. Pathology of the neck and gingival lesions showed poorly differentiated adenocarcinoma, which was compatible with metastatic gallbladder cancer (Figure 2). Fluorodeoxyglucose uptake was measured by positron emission tomography, with increased uptake identifying additional lesions in the left breast and posterior aspect of the left lower lung

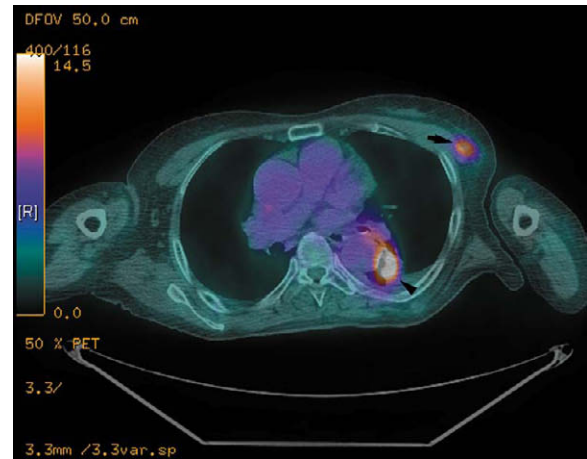


Figure 3. Increased fluorodeoxyglucose uptake on positron emission tomography identified additional metastases of the left breast region superolateral to the nipple (arrow), and the posterior aspect of the left lower lung field (arrow head).

(Figure 3). Computed tomography- and ultrasound-guided biopsy of the left breast and left lower lung field were performed, and showed metastatic carcinoma. Gross cystic disease fluid protein-15 marker was negative for breast and lung specimens. Gallbladder cancer with multiple metastases was diagnosed. After consultations regarding further treatment, hospice care was suggested and accepted by the patient's family. The patient died in June 2009, 41 days after presentation to the emergency department.

DISCUSSION

Gallbladder cancer is relatively rare but lethal [3]. The disease is approximately two to six times more common in women than in men. The major risk factor is chronic inflammation induced by cholelithiasis. Other risk factors include porcelain bladder and polyps [3]. The initial presentation of gallbladder cancer is often nonspecific, and most patients are diagnosed at an advanced stage. Transperitoneal spread is not rare, and peritoneal carcinomatosis can develop with advanced-stage diseases [3]. Median survival for carcinoma that is diagnosed in symptomatic patients is 9.2 months, with median survival of 26.5 months in patients with incidentally diagnosed gallbladder cancer [5].

Oral malignant tumors are almost squamous cell carcinoma. Metastatic cancer in the oral region accounts for ~1% of oral malignant tumors [6].

Patients who have a history of smoking, alcohol consumption and betel nuts chewing have a much higher risk of developing a second primary cancer of the oral cavity. For head and neck cancer patients, 5–25% will develop a second primary cancer in the aerodigestive tract at some stage, depending on the duration of follow-up. The prognosis for patients with oral metastasis is poor, with most dying soon after metastasis is confirmed. Hirshberg et al [7] reported that most metastatic tumors in the oral region are found in patients in their 5th to 7th decades of life. They have reported a metastatic ratio of 2:1 for jawbone to oral soft tissue involvement. The mandible is the most common site in the jawbones [7]. The attached gingiva is the most common site in oral soft tissue. The most common primary sites for metastases found in the oral region are the lung, kidney, liver, and prostate for men; and breast, genitalia, kidney, and colorectum for women [7]. Lim et al [8] stated that the most common primary site in South Korea is the liver, followed by the lung, thyroid gland, reproductive system, and colorectum. They reported one case that had spread from primary gallbladder cancer. Chen et al [9] also reported that the most common primary site for oral metastasis is the liver. These data from East Asia are different from those in Hirshberg's study [7], and the discrepancy might reflect the high prevalence of primary hepatocellular carcinoma in Taiwan and South Korea. The average survival time for these patients is about 7 months [7]. Palliative care can be considered when metastatic oral tumor is noted. Such tumors are rare; therefore, it is difficult for physicians to form a clear differential diagnosis with regard to the probable primary site. Complete physical examination, history taking, and imaging are necessary. When the patient has a history of cancer, we should always consider oral metastasis when he/she presents with an oral tumor.

Deep neck infection is a dangerous condition with high morbidity and mortality; the most common origin is dental infection [10]. Infection can potentially spread to any space in the neck, such as dangerous and parapharyngeal spaces. Diabetes mellitus is an important comorbid factor [11]. Early surgical intervention and empirical antibiotic therapy are recommended. Tracheotomy should be considered when airway compromise develops. Approximately 0.2% of primary

head and neck cancers have an initial presentation of deep neck infection [4]. It is unclear why such a small minority of patients develop deep neck infection. We hypothesize that previous infection or immune deficiency predisposes to infection of the metastatic neck lesion. However, we have found no mention of metastases from a primary site outside the head and neck that present as deep neck infection. When incision and drainage are performed, pathological examination of the tissue must be done to exclude malignancy. We hope that our report of a highly unusual case will remind clinicians that they should always consider the possibility of metastatic cancer when a patient with a history of cancer presents with an oral tumor or deep neck infection.

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齒齦腫瘤和深頸部感染表現之轉移性膽囊癌

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膽囊癌常於晚期診斷且預後相當不好。我們報告一 63 歲女性於 4 年前急性膽囊炎併膽囊破裂經腹腔鏡膽囊切除後診斷為膽囊癌，後行部份肝切除。其再次就診以左下齒齦腫瘤及深頸部感染表現，後續接受切開引流併腫瘤切片，病理切片皆證實為腺癌。正子斷層造影於左側乳房和左下肺野發現其他腫瘤，病理切片也都證實為腺癌。病人以轉移性口腔腫瘤表現是相當罕見的，我們強調當病人有癌症之過去病史，以新出現口腔腫瘤及深頸部感染表現時，臨床醫師必須謹慎考慮轉移性癌症之可能性。

關鍵詞：膽囊癌，齒齦腫瘤，轉移，頸部感染

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