Cervical Node Metastasis as the First Sign of Cancer of the Caecum

LUIGI BASSO1, LUCIANO IZZO1, ERIKA CALISTI1, GIUSEPPE CAVALLARO1, UMBERTO COSTI1, ANTONIO CIARDI2, FRANCESCA FORNARI1, ANDREA POLISTENA1 and GIORGIO DE TOMA1

1Cattedra di Chirurgia Generale, Divisione di Chirurgia "B", Department of Surgery "Pietro Valdoni" and 2Department of Experimental Medicine and Pathology, University of Rome "La Sapienza" First Medical School, Policlinico "Umberto I", Rome, Italy

Abstract. The unusual case of an adenocarcinoma of the caecum undiagnosed until the appearance of a large neck and axillary mass is reported. To our knowledge, this is the first reported case of cervical node metastasis as the first sign of a caecal cancer, and 18 fluorine-18-labeled 2-fluoro-2-deoxy-D-glucose positron emission tomography (FDG-PET) proved critical in achieving the correct diagnosis. When an adenocarcinoma is found in the neck or axilla, even an abdominal primary location such as the large bowel can be taken into account and employment of FDG-PET should be considered.

Metastases to the cervical lymph nodes from an unknown primary tumour commonly originate from the upper aerodigestive tract (1) and the need for a careful work-up in patients with asymmetric enlargement of cervical nodes has been stressed since 1952 (2). We report the unusual case of an adenocarcinoma of the caecum undiagnosed until the appearance of a large neck and axillary mass.

Case Report

A 73-year-old male came under our care three months after he noticed a lump on the left side of his neck. His previous bowel habits were regular and stayed unchanged. Eight weeks after the outbreak of these two lumps, before coming under our observation, his attending General Practitioner requested a cervical ultrasonography (US) which showed multiple enlarged lymph nodes on the left side of the neck, with a maximum diameter of 1.5 cm. A month later, after unsuccessful conservative treatment, the patient was referred to our surgical outpatient department. General examination was unremarkable, except for enlarged left cervical and left axillary nodes, which one month before were clinically normal. General blood results, physical examination, careful assessment of tonsils and a posterior laryngoscopy were all negative for clinical indications, while a computed tomography (CT) of the neck and chest with intravenous contrast confirmed and assessed the enlarged nodes described above (Figure 1). Fine-needle aspiration (FNA) of the cervical lump was performed, showing a poorly metastatic carcinoma (CK+, Pan Leu–). Oesophago-gastro-duodenoscopy, chest radiograph and US of salivary and thyroid glands were all unremarkable. As no primary lesion had yet been detected, 18 fluorine-labeled 2-fluoro-2-deoxy-D-glucose positron emission tomography (FDG-PET) imaging was performed, confirming areas of uptake in the left cervical and axillary areas and also revealing uptake in the right iliac fossa (RIF) (Figure 2). A full colonoscopy was therefore performed and a vegetating, partially ulcerated neoplasm was seen in the caecum, with a maximum diameter of 5 cm. Multiple biopsies were taken, showing adenocarcinoma of the large bowel. Serum carcinoembryonic antigen (CEA) and CA 19-9 were elevated.

The patient at this stage received a CT of the abdomen, which confirmed a solid neoplasm in the caecum, with no sign(s) of abdominal secondaries. Surgery consisted of right hemicolectomy and left lateral neck dissection and axillary dissection. The liver and other abdominal organs were free from disease on gross examination. Pathologically, an ulcerated lesion measuring 7 cm in maximum diameter with raised everted edges was seen in the caecum. The neoplasm involved the whole thickness of the wall of the bowel and the lumen was moderately stenotic. Microscopically, a poorly-differentiated adenocarcinoma infiltrating the subserosal adipose tissue, with metastasis in 1 out of 23 examined lymph nodes was observed. The cervical specimen consisted of a lump of 3 cm, containing...
several lymph nodes of which two were enlarged, with fixation, firmness and a white-grey colour. Histological examination showed proliferation of cohesive neoplastic cells, with a sharp interface towards the residual nodal tissue and multiple areas of necrosis. Immunohistochemistry was positive for cytokeratin 20, and negative for cytokeratin 7 and leukocyte common antigen, reflecting the same profile of the caecal tumour, thus associating both neoplasms (3). Comparative microscopic slides of both tumours with immunohistochemistry are shown in Figure 3. The tumour was pathologically staged as pT3 pN1 pM1 (stage IV), poorly-differentiated (G3) according to the International Union Against Cancer (4). The postoperative course was uneventful and the patient was discharged on the 13th postoperative day. However, he died nine months after surgery and chemotherapy.

Discussion

Metastases to the cervical lymph nodes from an unknown primary tumour are rare, representing about 2% of all new head and neck cancers (5), and the primary lesion, in these cases, most often occurs in the nasopharynx, skin or lung (5). The patient was a 53-year-old man, in good general health, who presented with a cervical lymph node mass. He had no symptoms referable to the tumour and had no history of smoking or alcohol consumption. On examination, a left cervical lymph node was found on palpation. Computed tomography of the neck with intravenous contrast showed an enlarged cervical lymph node (arrow) (Figure 1). 

Figure 1. Computed tomography of the neck with intravenous contrast showing an enlarged cervical lymph node (arrow).

Figure 2. 18Fluorine-labeled 2-fluoro-2-deoxy-D-glucose positron emission tomography (FDG-PET) imaging showing areas of uptake in the left cervical (A) and axillary lymph nodes (B), and in the right iliac fossa (C).

Discussion

Metastases to the cervical lymph nodes from an unknown primary tumour are rare, representing about 2% of all new head and neck cancers (5), and the primary lesion, in these cases, most often occurs in the nasopharynx, skin or lung (5). The patient was a 53-year-old man, in good general health, who presented with a cervical lymph node mass. He had no symptoms referable to the tumour and had no history of smoking or alcohol consumption. On examination, a left cervical lymph node was found on palpation. Computed tomography of the neck with intravenous contrast showed an enlarged cervical lymph node (arrow) (Figure 1). 

Figure 1. Computed tomography of the neck with intravenous contrast showing an enlarged cervical lymph node (arrow).

Figure 2. 18Fluorine-labeled 2-fluoro-2-deoxy-D-glucose positron emission tomography (FDG-PET) imaging showing areas of uptake in the left cervical (A) and axillary lymph nodes (B), and in the right iliac fossa (C).
instances, is later to be commonly found in the upper aerodigestive tract. In a historical series of 157 patients of the Memorial Sloan-Kettering Center of New York, U.S.A. with unexplained cervical node metastasis, 79 patients were reported to have epidermoid carcinoma, 29 adenocarcinoma, 13 anaplastic carcinoma and 11 melanoma (1). Evaluation of patients with cervical node metastasis of occult origin should, therefore, include: thorough medical history, detailed physical examination of the skin, evaluation of the upper respiratory and digestive systems complemented by endoscopy, careful assessment of tonsils, salivary and thyroid glands, FNA of the mass(es), chest radiographs and imaging studies (US, CT scan, magnetic resonance imaging, scintigraphy). Recently, FDG-PET has shown itself to be a useful diagnostic imaging tool in these patients. Thoracic and abdominal primaries (especially from the lungs, oesophagus, stomach, ovary, biliary tract, or pancreas) should be sought in case of an adenocarcinoma discovered in a cervical lump. A recent review showed that of 52 patients with head and neck metastases from an occult primary site reported in the

Figure 3. Comparative slides, showing positive immunohistochemistry (cytokeratin 20) of poorly-differentiated adenocarcinoma in both the specimen of the large bowel (A) and of the cervical lymph nodes (B) (PAP-DAB, x250).
literature, 33 (63.5%) had metastases to the cervical lymph nodes, 3 (5.8%) to the thyroid gland, 6 (11.5%) to the paranasal sinus, 3 (5.8%) to the tonsils, 3 (5.8%) to the parotid gland, 2 (3.8%) to the ear, and 1 each (1.9%) to the larynx and to the mandible, respectively. Of the 33 patients with metastases to the cervical lymph nodes, 17 (51.5%) had secondaries from a primary in the gastrointestinal tract, but only 2 out of 33 (6.1%) had primary abdominal digestive neoplasms, one arising from the liver and one being a carcinoid tumour of the terminal ileum (6, 7). In any case, all of these advanced stage IV malignancies imply ominous outcomes.

To our knowledge, this is the first reported case of cervical node metastasis as the first sign of a caecal cancer. It is not known how cancer cells could have reached the neck from the large bowel, without grossly involving the hepatic filter. Lymphatic spread through retrograde or unusual flow should be considered, while haematogenous dissemination can be ruled out due to the existence of hepatic and pulmonary filters. Indeed, somewhat bizarre secondaries can be the first sign of abdominal malignancies, such as Sister Mary Joseph’s umbilical nodule, which, however, is located at an abdominal level (8).

FDG-PET allows detection of the primary tumour in about 21% of cases located above the diaphragm (9), while it proves more sensitive than CT and monitoring of CEA and CA 19-9 levels in detecting abdominal secondaries and/or recurrences of colorectal cancer (10, 11). In the case we report, FDG-PET proved critical in identifying the primary lesion, while CT had initially been aimed only to the chest and neck, as they are the common site of origin of these tumours.

In conclusion, distant metastases to the cervical, or axillary lymph nodes from an unknown primary neoplasm are rare and have a poor prognosis. When an adenocarcinoma is found in these areas, even an abdominal primary location such as the large bowel should be taken into account and employment of FDG-PET should be considered.

References


Received April 16, 2007
Revised July 12, 2007
Accepted July 24, 2007