

SWOLLEN SCAPULA AS THE FIRST CLINICAL FEATURE OF DISSEMINATED MALIGNANT DISEASE

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OTOK SKAPULE KAO PRVA KLINIČKA MANIFESTACIJA DISEMINIRANE MALIGNNE BOLESTI

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ABSTRACT

Metastases to the scapula are very rare as a primary clinical presentation of malignancies. In this Case Report have been described two cases of metastases to the scapula which gave the presenting clinical features of different disseminated carcinomas in patients in good performance status (ECOG 1). In the first case, detailed examination revealed that swollen scapula was the result of cancer that had spread from the rectum. In the second case, the scapula cancer metastasis originated from the cervix. Good condition of patients, despite widespread diseases, allowed the systemic and palliative treatment, which had resulted in the clinical improvement, slower progress of disease and improvement of patient's quality of life.

Keywords: scapula, metastasis, rectal cancer, cervical cancer

SAŽETAK

Metastaze na skapuli veoma retko daju prvu kliničku prezentaciju malignih bolesti. U ovom prikazu slučaja su opisana dva slučaja u kojima su metastaze na skapuli dale prezentujuće kliničke manifestacije različitih diseminiranih karcinoma kod bolesnika sa dobrim performans statusom (ECOG 1). U prvom slučaju detaljna ispitivanja su otkrila da je otok skapule posledica udaljenog širenja karcinoma rektuma. U drugom slučaju, metastaze na skapuli vodile su poreklo od karcinoma grlića materice. Dobro opšte stanje bolesnika, uprkos odmaklim stadijumima bolesti, omogućilo je sistemsko i paliativno lečenje, što je za rezultat imalo kliničko poboljšanje, sporije napredovanje bolesti i poboljšanje kvaliteta života bolesnika.

Ključne reči: skapula, metastaze, karcinom rektuma, karcinom grlića materice

ABBREVIATIONS

ECOG: Eastern Cooperative Oncology Group
FOLFOX4: FOL – Folinic acid (leucovorin),
F – Fluorouracil (5-FU) and OX – Oxaliplatin

FOLFIRI: FOL – Folinic acid (leucovorin),
F – fluorouracil (5-FU) and IRI – irinotecan

INTRODUCTION

Bone metastases are a common site of advanced malignancies and cause increased morbidity, including pain, hypercalcemia, pathologic fractures, and spinal cord compression, leading to surgery or bone radiation therapy for a symptomatic metastasis. They are usually a manifestation of distant relapse from many types of solid cancers, especially those arising in the lung, breast, and prostate (1). Rarely, advanced cancers can be presented as initial bone pathology. This Case Report shows rare examples of different advanced solid tumors that have metastasized to the scapula. In each case, metastases to the scapula gave the initial clinical features of disseminated malignant diseases.

CASE REPORT

The first patient, 62 year-old-male, with no history of malignant disease, was admitted to the Department of Orthopedics with symptoms of pain and swelling of the right scapula and altered function of the right shoulder. As shown on the right-shoulder X-ray image (Figure 1.), the bone structure of the acromion was not differentiated from the surrounding tissues. The only exception is the part that borders with the right acromioclavicular joint, where osteolytic changes were observed. The right-shoulder CT scan (Figure 2.) revealed an infiltrative tumor change (87x82mm) in the soft tissues of the right acromioclavicular joint. The composition of the infiltrate was non-homogeneous, with the



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Figure 1. The right shoulder X-ray: osteolytic changes of the right acromioclavicular joint.

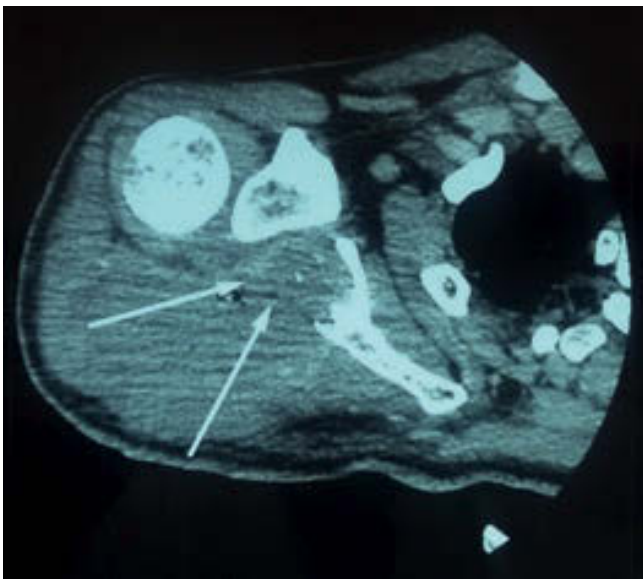


Figure 2. The right-shoulder CT scan: tumor infiltration in the soft tissues of the acromioclavicular joint.

presence of gas inclusions. The patient underwent shoulder joint arthroscopy with biopsy of revealed tumor changes. The chest CT scan (except for the already described tumor changes of the right scapula) showed enlarged axillary-, pre-pericardial- and supra-diaphragmatic lymph nodes. The abdominal CT scan revealed multiple liver metastases (Figure 3.) and enlarged celiac lymph nodes. Tumor markers CEA and CA 19-9 increased several times. Histopathological ex-

amination of the right shoulder tumor infiltrate showed the following finding: „tumor proliferation of well differentiated adenocarcinoma, most likely originating from the lower gastrointestinal tract (CDX2 +, CK20-/+, CK7-)“ (Figure 4.) . Subsequent colonoscopy showed rectal tumor, 15cm from the *linea anocutanea*. Histopathological finding of the biop-
tate was as follows: „ Adenocarcinoma intestinocrassi (recti) , medium differentiated, histological grade G2“ (Figure 5) . Subsequent NMR examination of the lumbosacral bones showed malignant infiltration of the L3 vertebral body with paraspinal propagation in L3-4 intervertebral foramen. Bone scintigraphy showed increased activity accumulation in lumbar and sacral vertebral bodies, in the left sacroiliac joint, left acetabulum, the proximal and distal right humerus, with infiltration of the scapula and clavicle. As the patient was in good performance status (ECOG 1) , treatment was continued with chemotherapy with FOLFOX4 protocol (6 cycles) , and palliative single shot radiotherapy (8Gy) of the right scapula and shoulder, with the good effect on pain management. After three months of stable disease (SD) , new CT scans revealed progression of lung-, liver- and bone metastases. Treatment continued with 6 cycles of chemotherapy with FOLFIRI protocol and bisphosphonates, with a therapeutic effect evaluated as SD. Furthermore, the patient did not respond to the scheduled evaluation of the disease.

The second patient, 74-year-old female without a history of cancer developed swelling of the left scapular bone. Initially, she felt just tactile discomfort in this area, without spontaneous pain. The patient contacted the general practitioner who referred her to the rheumatologist for suspecting rheumatological disease, and she was scheduled for rheumatological examination. In the meantime, a month after first scapular symptom occurred, she noticed discreet vaginal bleeding, so she underwent gynecological examination. The patient was in good performance status (ECOG 1) , and in addition to the above symptoms she started to feel fatigue and a lack of energy. Gynecological evaluation and cervical biopsy confirmed malignant neoplasm of the cervix with the following histopathological finding: „Screened fragments of tumor tissue are presented without preservation of the surrounding structure. Morphologically, tumor tissue corresponds to invasive squamous cell large cell carcinoma, G3“. Further careful evaluation, radiographs, and subsequent imaging revealed extended malignancy with metastases to the lungs and infiltration of the posterior wall of the chest and the left scapula, metastases to the lymph nodes of the thorax, abdomen and pelvis, bladder infiltration with bilateral hydronephrosis grade II and III. After permanent catheter was inserted, her urine output was measured at 1, 5 liters per day on average, with initial creatinine clearance 24ml/min. The treatment continued with systemic *cisplatin monotherapy (mCDDP) by 60% reduced dose*. After 3 cycles of the *mCDDP therapeutic effect was evaluated as stable disease (SD) with clinical improvement in the form of minimal reduction of scapular swelling, complete reduction of tactile stimuli scapular pain and improvement in creatinine*



clearance to 40 ml/min. After 6 cycles of the mCDDP CT scans revealed progression of disease.

DISCUSSION

Bone is the third most common site of distant metastases, after the lung and liver (2, 3, 4). Among solid cancers, breast, prostate, lung, thyroid, and kidney cancer account for 80 percent of all skeletal metastases, but also, many other primary malignant tumors can spread to the bones. Metastatic bone disease (particularly fracture) is a prominent contributor to the deterioration in quality of life in patients with cancer (5, 6). Also, bone metastases represent a significant challenge to healthcare, in terms of the current increase in morbidity from malignancies and aging population trend (7, 8). However, ongoing improvements in systemic therapy extend the lives of patients with metastatic bone disease and enable a better quality of life (9, 10). Scapula is not frequently affected by metastases originated from the solid tumors. Metastases to the scapula are even more unlikely to occur as the first clinical presentation of disseminated malignant disease. So far, these cases have been described as part of advanced malignant lung disease as a result of expansion per continuitatem (11, 12, 13), advanced hepatocellular carcinoma (14), carcinoid tumors (15), but also the cases of isolated metastasis to the scapula originated from colon cancer (16), carcinoma of the lip (17) and bladder carcinoma (18). In the case of our patients, metastases to the scapula occurred within advanced rectal and cervical cancer. At the time of detection of scapular swelling both patients were in good performance status, and based on it, the nature and severity of diseases could not be assumed. In both cases, after the completion of tumor evaluation, despite advanced stages of malignant diseases, good performance status of patients allowed continuation of systemic chemotherapy and (in the first case) palliative radiotherapy of the scapula and shoulder.

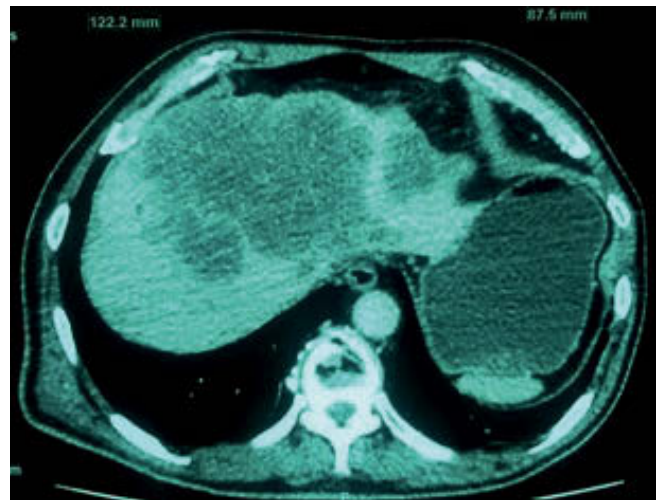


Figure 3. Abdominal CT scan shows multiple liver metastases.

CONCLUSION

Metastases to the scapula can show initial symptoms within extended malignant diseases of different primary tumors. During the initial diagnostic evaluation of the cause of the painful swelling of the scapula, healthcare providers have to develop simultaneous approach with different diagnostic procedures and make a broader evaluation of disease, as earlier diagnosis of possible advanced malignant processes can enable systemic treatment in case of patients with good performance status.

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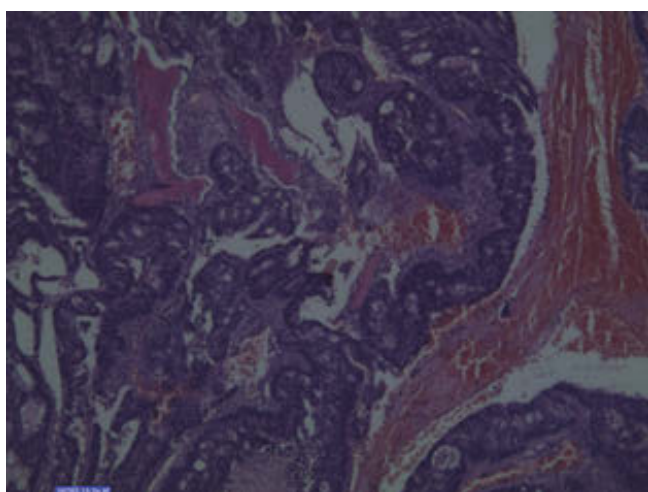


Figure 4. Tumor infiltrate of well differentiated adenocarcinoma originating from the lower gastrointestinal tract pervade the right shoulder joint synovial structures.

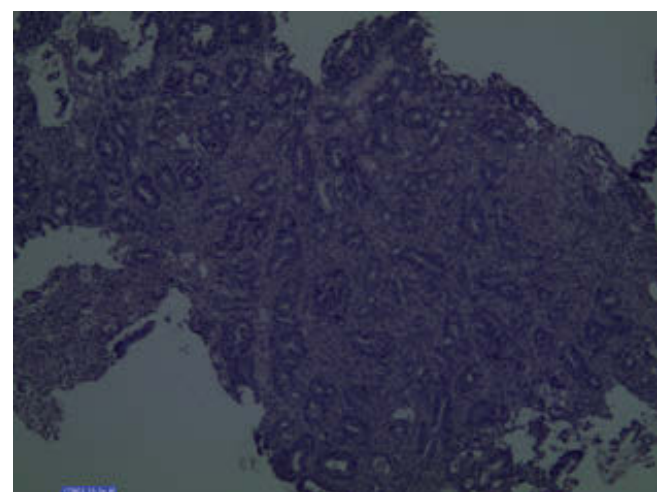


Figure 5. Pathohistological findings of rectal tumor biopsy showed medium-differentiated adenocarcinoma.



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