There is a lack of clear guidance regarding the clinical management of such patients, as the optimal treatment of intramuscular metastasis is not known. Excision of the painful mass will not only relieve pain, but it may also prolong the patient's survival (5), especially in those with solitary metastasis after a long disease-free interval and if the primary tumor is under control, as in our patient.

The use of chemotherapy has been studied, but its role is still controversial due to different therapeutic results. Most of the patients received 5-fluorouracil (5-FU) alone or with combinations of regimens (2,4,6,7). Our patient did not receive chemotherapy for the muscle metastasis.

As far as the radiotherapy is concerned, some reports mentioned effective control of the pain and the size of metastatic lesions (2,5,6). The radiotherapy dose was often decided on according to the location and depth of this type of metastatic lesion (5). Our patient took the highest dose of radiation therapy, and his pain was relieved and the mass was shrunk.

Our patient had the longest survival after the diagnosis of the muscular metastasis, which was 30 months. He underwent wide excision and received high doses of radiation therapy.

REFERENCES

1. Narvaez JA, Narvaez J, Clavaguera MT, et al. Bone and skeletal muscle metastases from gastric adenocarcinoma: unusual radiographic, CT and scintigraphic features. Eur Radiol 1998; 8: 1366-9.
2. Bese NS, Orzuzoglou M, Dervisoglou S, et al. Skeletal muscle: an unusual site of distant metastasis in gastric carcinoma. Radiat Med 2006; 24: 150-3.
3. Oba K, Ito T, Nakatani C, et al. An elderly patient with gastric carcinoma developing multiple metastasis in skeletal muscle. J Nippon Med Sch 2001; 68: 271-4.
4. Kondo S, Onodera H, Kan S, et al. Intramuscular metastasis from gastric cancer. Gastric Cancer 2002; 5: 107-11.
5. Tuoheti Y, Okada K, Osanai T, et al. Skeletal muscle metastases of carcinoma: a clinicopathological study of 12 cases. Jpn J Clin Oncol 2004; 34: 210-4.
6. Rosenbaum LH, Nicholas JJ, Slasky BS, et al. Malignant myositis ossificans: occult gastric carcinoma presenting as an acute rheumatic disorder. Am Rheum Dis 1984; 43: 95-7.
7. Porile JL, Olopade OI, Hoffman PC. Gastric adenocarcinoma presenting with soft tissue masses. Am J Gastroenterol 1990; 85: 76-7.

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Isolated left supraclavicular hydatid cyst mimicking Virchow's node

Virschow nodülünü taklit eden izole sol supraklavikular kist hidatik

To the Editor,

Hydatidosis has been known since Hippocrates, and hydatid disease, also called echinococcosis, is caused by the tapeworm *Echinococcus granulosus* (1). The disease is still endemic in many locations, such as the Middle East, Eastern Europe, South America, Australia, and South Africa (2).

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Manuscript received: 28.05.2011 **Accepted:** 08.11.2011

doi: 10.4318/tjg.2012.0447

Dogs, wolves, foxes, and other canines are the definitive hosts, harboring adult worms in their small intestines. The cestodes begin their life cycles in the intestines of definitive hosts, such as dogs, from which they are excreted in feces and subsequently ingested by cattle and sheep (and rarely humans), which serve as intermediate hosts. Once ingested, the organism penetrates the intestinal wall of its intermediate host and migrates through the host's circulatory system, eventually depositing into an organ and forming a cyst (3,4). Although it tends mostly to form in the liver (75%) or lung (15%), other organs of the body, including the brain, heart, bones, muscle, kidney, and pancreas may also be affected (5).

Here, we present a case of an isolated left supraclavicular hydatid cyst, which complicated the diagnosis by mimicking Virchow's node.

A 39-year-old woman living in a rural area was admitted to our hospital with the complaint of a painless, growing mass in the left supraclavicular region. There was no accompanying symptom. Physical examination showed an approximately 3-4 cm solid mass in the left supraclavicular region. Computed tomography (CT) scanning showed an encapsulated heterogeneous mass with cystic components associated with vascular structures. It was suspicious as a lymph node or malignant mass. Further work-up was performed. CT scanning of the whole abdomen and chest was reported as normal. Tumor markers were found in normal ranges. Excision and biopsy of the mass were decided. Total excision of the left supraclavicular mass was undertaken. There were adhesions between the mass and the trapezius muscle as well as surrounding tissue. The mass was excised completely with safe surgical margins without rupture. We did not use any protoscolicidal agent for irrigation of the surgical area as the definite diagnosis was unclear. During the perioperative and postoperative period, there was no morbidity such as allergic reaction. In the gross examination of specimen, the tissue was cream in color, measuring 3.5x3x2.5 cm. The cut section revealed a multilocular white cyst with regular borders in the lymphadenopathy and opalescent fluid within (Figure 1). In the histopathological examination, the cyst wall consisted of three layers. The inner (germinal) layer possessed nuclei. The second layer (laminated membrane) was eosinophilic, amorphous and avascular. The third (adventitial) layer was dense fibrovascular tissue with chronic inflammatory cells (Figure 2). The cyst contained numerous protoscolices and daughter cysts (Figure 3).

The histopathological examination surprisingly showed the diagnosis of hydatid cyst. Indirect hemagglutination test performed after this diagnosis was negative. Albendazole was administered after diagnostic confirmation by histopathological examination. The patient is already free of disease and follow-up for 16 months is planned.

In our case, the patient had a growing painless mass in the left supraclavicular region. Clinical and radiological examination had revealed suspi-

Figure 1. A cut in the surface of the lymphadenopathy shows a white cyst with surrounding fibrous capsule.

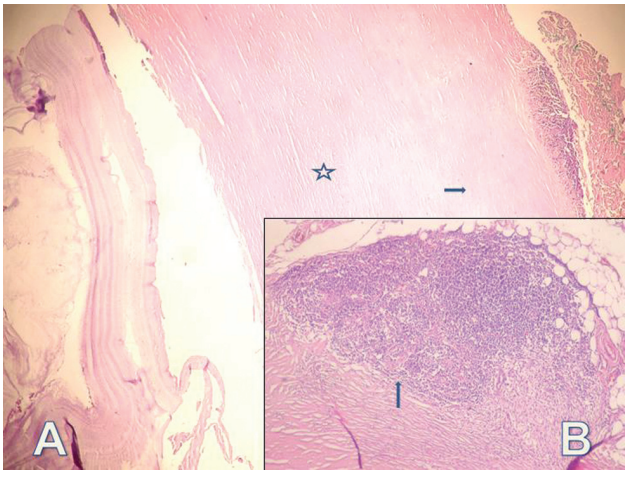

Figure 2. Microscopic image of the lymphadenopathy reveals laminated membrane surrounded by thick fibrous capsule (star) and lymphoid tissue (arrows) (hematoxylin-eosin (HE), original magnification, A: HE x100, B: HE x400).

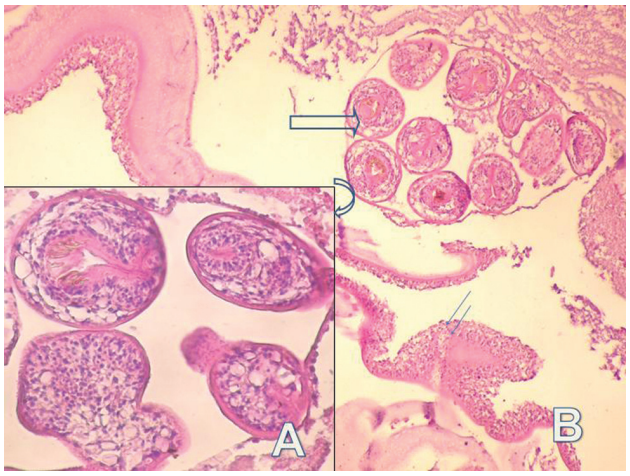

Figure 3. Daughter cysts with germinal layers (arrows) and scolices (arrow) (hematoxylin-eosin (HE), original magnification, A: HE x400, B: HE x100).

cion of malignancy. Therefore, imaging series were performed for investigation of a primary tumor but nothing was revealed. Radiologic signs of hydatid disease in the soft tissue were reported as nonspecific (4,5). Imaging examinations should be confirmed by serologic tests, which are 80-100% sensitive and 88-96% specific for liver hydatid disease, but are less sensitive and have 33% false-positive rate for lung and other organ involvement (4,5). We did not test serologic markers preoperatively, but postoperatively indirect hemagglutination test was found to be negative.

Surgical treatment is preferred for the cure of hydatid disease and complete excision is the treatment of choice (5,6). The surgical excision may be aggressive if it is performed for diagnosis. The surgical excision without rupture in our patient prevented both spread of the disease and anaphylactic reactions. Anaphylactic reactions and associated negative biopsy results were reported by fine needle aspiration biopsy (FNAB) (7). Solitary and asymmetric suspicious enlargement, location in the supraclavicular area, progressive increase in size, or other associated historical or physical examination markers led to a consideration of interventional excision (8).

The clinical presentation of our patient and the diagnostic studies we performed were consistent with the recent review about primary subcutaneous hydatid cysts by Kayaalp et al. (9) In their review, the authors mentioned that the main symptom was a painless, slow-growing mass, and complete excision was the treatment of choice.

In conclusion, the location of supraclavicular masses is significant for neoplastic lesions as it is unusual for hydatid disease. Therefore, there will be a diagnostic conflict in the management of these masses. Imaging studies will give some clues about the nature of these masses, but definite diagnosis has to be made by histopathological confirmation. This unusual case was presented to remind clinicians that hydatid cyst should be considered in the differential diagnosis of a progressively growing mass in the supraclavicular region. We recommend the complete surgical excision of these lesions with safe margins for both diagnosis and treatment.

REFERENCES

1. Orhan Z, Kara H, Tuzuner T, et al. Primary subcutaneous cyst hydatic disease in proximal thigh: an unusual location: a case report. BMC Musculoskelet Disord 2003; 4: 25.
2. Kouskos E, Chatziantoniou J, Chrissafis I, et al. Uncommon locations of hydatid cysts. Singapore Med J 2007; 48: e119-21.
3. Safioleas M, Misiakos EP, Kakisis J, et al. Surgical treatment of human echinococcosis. Int Surg 2000; 85: 358-65.
4. Ergin A, Toker T, Yanarates O, et al. A typical low-back pain caused by an atypical etiology. Reg Anesth Pain Med 2007; 32: 89-92.
5. Moghimi M, Kamrava SK, Asghari AM, et al. Primary echinococcal cyst in the thyroid gland: a case report from Iran. J Infect Dev Ctries 2009; 3: 732-4.
6. Hatipoglu AR, Coskun I, Karakaya K, Ibıs C. Retroperitoneal localization of hydatid cyst disease. Hepatogastroenterology 2001; 48: 1037-9.
7. Gokce C, Patiroglu T, Aksehirli S, et al. Hydatic cyst in the thyroid gland diagnosed by fine-needle aspiration biopsy. Thyroid 2003; 13: 987-9.
8. McGuirt WF. The neck mass. Med Clin North Am 1999; 83: 219-34.
9. Kayaalp C, Dirican A, Aydin C. Primary subcutaneous hydatid cysts: a review of 22 cases. Int J Surg 2011; 9: 117-21.

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