Each lesion is a tumor unless otherwise proven!

Her kitle aksi ispat edilene kadar tümördür!

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Dergiye Ulaşma Tarihi: 02.06.2016 Dergiye Kabul Tarihi: 29.08.2016 Doi: 10.5505/aot.2017.85856

ÖZET

Giriş ve Amaç: Kliniğimizde tümör ön tanısı ile incelenen ve patolojik inceleme sonucu tümör benzeri lezyon saptanan olguların değerlendirilmesi amaçlandı.
Yöntem ve Gereçler: Ocak 1987-Ocak 2012 yılları arasında kemik ve yumuşak doku tümörü ön tanısı ile ileri inceleme yapılan 349 olgu retrospektif olarak incelendi. Olgular yaş, cinsiyet, lokalizasyon, patolojik tanı ve özellikleri açısından değerlendirildi. Elde edilen veriler SPSS 15.0 sistemine aktarılarak analiz edildi. Verilerin normal dağılıma uyup uymadığı Shapiro-Wilk testi ile değerlendirildi.
Bulgular: 349 olgunun 175'i (%50.1) erkek, 174'ü (%49.9) kadın ve yaş ortalaması 35.3 idi. Lezyonların 101'i (%28.9) femur ve uylukta, 56'sı (%16) tibia, fibula ve baldırda lokalize idi. Lezyonların incelenmesi sonucunda 79'unun (%22.6) normal doku olduğu, 74'ünün (%21.2) iltihabi olay, 63'ünün (%18.1) ise osteomiyelit olduğu görüldü. Verilerimiz tümör ile en çok enfeksiyon ve normal doku reaksiyonunun karıştığını gösterdi.
Tartışma ve Sonuç: Kemik ve yumuşak doku tümörünü şüphelendiren kliniğe ve özelliklere sahip olan her olgu aksi ispat edilene kadar tümör kabul edilerek bu yönde ileri tetkik ve tedavisi düzenlenmelidir. Bu yaklaşım morbidite ve mortaliteye sebep olan tümörün erken tanı ve tedavisine olanak sağlayacaktır.
Anahtar Kelimeler: Tümör benzeri lezyon, Tümör, Kemik, Yumuşak doku, Analiz

ABSTRACT

Introduction: The purpose of this study was to assess the cases that were examined with a prediagnosis of tumor but were found to have tumor-like lesions as a result of pathological examination.
Methods: 349 cases that had undergone advanced examination with a prediagnosis of bone and soft tissue tumor and had been found not to have tumor between January 1987 and January 2012 were examined retrospectively. The cases were assessed in terms of age, gender, localization, pathological diagnosis and features. The data were analyzed by SPSS 15.0. Shapiro-Wilk test was used to find out whether the data were distributed normally.
Results: 175 (50.1%) of 349 cases were men, while 174 (49.9%) were women and the average age was 35.3. 101 (28.9%) of the lesions were localized in the femur and thigh while 56 (16%) were localized in tibia, fibula and calf. Results of the examinations of lesions showed that 79 (22.6%) were normal tissue, 74 (21.2%) were inflammatory and 63 (18.1%) were osteomyelitis. Our data showed that infections and normal tissue reaction were most commonly mistaken for tumor.
Discussion and Conclusion: Each case with the clinic and features which bring to mind bone and soft tissue tumor should be accepted as tumor unless otherwise proven and advanced examination and treatment should be organized accordingly. This approach will allow the early diagnosis and treatment of tumor which causes morbidity and mortality.
Keywords: Tumor-like lesion, Tumor, Bone, Soft tissue, Analysis

Introduction

Cancer is among the leading causes of death due to the complications and metastases it causes and this situation presents itself as a medically and socially important health problem. Since cancer is considered to mean death in society, even the prospect of cancer is regarded with fear and anxiety.

Bone and soft tissue tumors and tumor-like lesions which involve the skeletal system can be seen at any age, in any part of the body and with various clinical findings. Despite these differences, tumors and tumor-like lesions can show findings which can be mistaken for each other (1). Today, increasing experience and technological developments have made the diagnosis based on the features of the patient and the lesion easier. Still, most of the time,

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biopsy has the key role in diagnosis (2). When all these are considered, bone and soft tissue tumors which cause morbidity and mortality and tumor-like lesions should be distinguished and suitable diagnosis and treatment should be made. Thus, tumor-like lesions which are also known as tumor precursor should be known well and should certainly be kept in mind in the definitive diagnosis of tumor.

In this study, the cases that underwent biopsy and/or surgical treatment in our clinic with a prediagnosis of bone and soft tissue tumor and diagnosed not to have tumor as a result of pathology were evaluated in line with literature.

Material and Method

349 cases, which underwent advanced examination between January 1987 and January 2012 with a prediagnosis of bone and soft tissue tumor and were found to have tumor-like lesion as a result of pathological examination, were examined retrospectively after permission was taken from the local ethical board.

In order to be able to determine the diagnosis and to plan the suitable treatment of the cases that were admitted to our clinic with a prediagnosis of bone and soft tissue tumor, the cases were assessed in detail in skeletal system and soft tissue tumors council which consisted of orthopedic oncology, medical oncology, pediatric hematology-oncology, radiation oncology, radiology, pathology and nuclear medicine experts in terms of anamnesis, physical examination, laboratory findings and radiological examinations. The decisions of the tumor council determined the planning and the interventions. The samples taken from the cases that underwent biopsy and/or surgical treatment were analyzed in detail by the pathology and microbiology department. The cases that were found to have tumor-like lesions as a result of the pathological examination were included in the study. The cases were analyzed in terms of age, gender, localization, pathological diagnosis and features.

The data were analyzed by SPSS 15.0 (SPSS Inc., Chicago, IL, USA) program. Shapiro-Wilk test was used to find out whether the data were distributed normally. The data which were normally distributed were expressed in terms of average±standard deviation, while the data which were not normally distributed were expressed in terms of mean (min-max).

Results

Of the 349 cases that were found to have tumor-like lesion, 175 (50.1%) were men, while 174 (49.9%) were women and the average age was 35.3. 101 (28.9%) of the lesions were localized in the femur and thigh while 56 (16%) were localized in tibia, fibula and calf. Results of the pathological examinations showed that 79 (22.6%) of the lesions were normal tissue, 74 (21.2%) were active-chronic inflammation and 63 (18.1%) were osteomyelitis (Figure 1). Tumor-like lesions in our series were summarized in Table 1.

Table 1: Tumor-like lesions.

Pathological diagnosis	Number (n)	Percentage (%)
Normal tissue	79	22.6
Infection	74	21.2
Osteomyelitis	63	18.1
Necrotic bone	24	6.9
Inflammatory changes	20	5.7
Tuberculosis	19	5.4
Callus	19	5.4
Osteoarthritis	9	2.6
Metabolic disease	9	2.6
Miyositis ossificans	8	2.3
Synovial hyperthrophy	8	2.3
Osteoporosis	5	1.4
Nodular fasciitis	3	0.9
Calcinosis	2	0.6
Synovitis	2	0.6
Hydatic cyst	2	0.6
Osteochondritis dissecans	1	0.3
Paget's disease	1	0.3
Bursitis	1	0.3
Total	**349**	**100**

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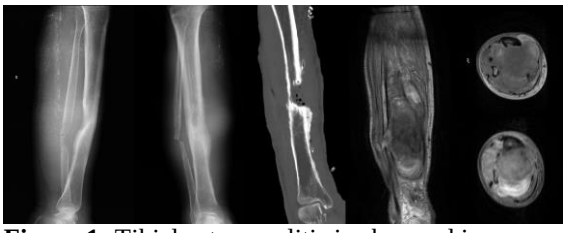

Figure 1: Tibial osteomyelitis is observed in radiological examinations

When the data in our series were analyzed, it was found that the most common reason was infection with 164 (46%) cases and 79 (22%) cases that were thought to have tumor in fact had normal tissue.

Discussion

Bone and soft tissue tumors are rare tumors (3). Since they are rare, they are mistaken for tumor-like lesions and serious problems arise during diagnosis. Although the additional examinations conducted on a tumor-like lesion thinking that it is a tumor may seem unnecessary, delaying the diagnosis and treatment of a tumoral lesion by thinking that it is a tumor-like lesion can cause irreversible results and increase morbidity and mortality. Detailed anamnesis, a careful physical examination, necessary laboratory and radiologic examinations are required in the diagnosis of tumor and tumor-like lesions (4, 5). Despite all these assessments, it is not always possible to make a diagnosis in experienced centers and biopsy is made for definitive diagnosis (2). 349 cases that underwent biopsy for definitive diagnosis due to a prediagnosis of tumor were found not to have tumor as a result of pathological examination.

Bacterial, viral, fungal and parasitary infections, stress fractures, myositis ossificans, Paget's disease and metabolic diseases frequently present as tumor-like lesions (6). In our study, the most common reason was found as infection with 164 (46%) cases and 79 (22%) cases that were thought to have tumor were found to have normal tissue lesion. This result brought to mind that normal tissue can also undergo reactive change as tumoral lesions due to various reasons such as trauma and infection.

Infections in the bone and soft tissues which have high virulence can be diagnosed and treated early since they have obvious clinical symptoms and laboratory findings. However, since clinical symptoms and laboratory findings formed by factors which do not have high infection virulence are not obvious, they can easily be mistaken with tumor (7). In order to be able to distinguish these two lesions from each other, anamnesis and physical examination should be made very carefully and radiological and/or laboratory examinations should be asked based on the prediagnosis. While assessing the patient, the important thing is not to ignore that the lesion can be a tumoral mass by taking prediagnosis into consideration. But it is not right to see each mass, pain or bone change as tumor. This balance is medically and socially important.

Infections are most frequently mistaken for Ewing Sarcoma in childhood age group, while they are mistaken for Lymphomas in adults. The cause is mostly bacteria, fungus, tuberculosis and fungal infections can also be seen. Infection, which was found as the most frequent reason in our study was in the form of acute-chronic inflammation in 74 (21.2%) cases, osteomyelit in 63 (18.1%) cases, tuberculosis in 19 (5.4%) in 19 cases, nodular fasciitis in 3 (0.9%) cases, synovitis in 2 (0.6%) cases, hydatic cyst in 2 (0.6%) cases and bursitis in 1 (0.3%) case.

Although infections can be seen in any age group and any bone, they are frequent in childhood and lower extremity (8). In our case, the average age was 35.3. Most of the lesions were located in the lower extremity, 101 (28.9%) were in femur and thigh while 56 (16%) were localized in tibia, fibula and calf.

As a conclusion, each case with a doubt of bone and soft tissue tumor or persistent findings should be considered as tumor unless otherwise proven. This approach will enable the early diagnosis and treatment of tumor that causes morbidity and mortality.

Acknowledgement We thank to members of tumor council of our university.

Conflict of interest: None

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