
* . . . *

<p>가 139 86 , 가 53 101 (93.5%), 1 (5.3%) (76.2%),</p>	<p>가 108 , 20.2 , 19 (61.3%) 11 (57.8%) 66 (61.1%), 가 18 (16.7%) 가 6 (19.4%)</p>	<p>31 , 가 42.4 49 (48.5%), 77 20 (64.5%) 가 (p=0.009, p=0.014), (p=0.037).</p>
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, , .

, 가

20

4.

Mann-Whitney U test, student t-test chi square

가

1.

가 (Table

1), 101 (93.5%), 19 (61.3%)

92 (85.2%),

19 (61.3%)

9 (8.3%)

1.

1982

2001

3

(2.8%),

8 (25.3%)

2 (1.9%)

가 가 139

2 (1.9%),

4 (12.9%)

108

31 가 86 가 53

49 (48.5%),

20.2

1 (5.3%)

42.4

2.

2.

2001 11

12

87

12

77 (76.2%),

11 (57.8%)

52

(intermittent

가

pain)

75 (74.3%),

13

(, (68.4%)

70 (69.3%),

),

(

14 (73.6%)

Table 1. Initial symptoms for consulting a doctor

	Osteosarcoma	Chondrosarcoma
Pain	92(85.2%)	19 (61.3%)
Palpable mass	3 (2.8%)	8 (25.8%)
Pain and palpable mass	9 (8.3%)	0 (0%)
Limping	2 (1.9%)	0 (0%)
Incidental finding	2 (1.9%)	4 (12.9%)
Total	108	31

Table 2. Initial diagnosis at the first medical visit

	Osteosarcoma	Chondrosarcoma
Malignant bone tumor	66 (61.1%)	20 (64.5%)
Fracture	18 (16.7%)	0 (0%)
Benign bone tumor	13 (12.0%)	3 (9.7%)
Nonspecific pain	3 (2.8%)	2 (6.5%)
Infectious condition	1 (0.9%)	6 (19.4%)
Growing pain	4 (3.7%)	0 (0%)
Arthritis	1 (0.9%)	0 (0%)
Contusion	1 (0.9%)	0 (0%)
Sprain	1 (0.9%)	0 (0%)
Total	108	31

3.

66 (61.1%) , ,
 20 (64.5%) ,
 13 (12.0%), 3 (9.7%)
 가 18
 가 13

(Table 2). 18 가 6 (19.4%) 가

81 56
 (69.1%) 58 30
 (51.7%) , 18
 (p=0.037).

4.

129 101
 (93.5%), 28 (90.3%)

76.0% ,
 40% ,
 (p=0.013).
 85 (65.9%) ,

1 (10%)

(p=0.001).

5.

(NSAIDs)

11 , 9 , 2
 가 3

가 1 .

77.5 ,
 22.5 가 (p=0.153).
 , 5 1

14 , 1 4
 가
 , 1 , 3
 , 12

3

가

가

가

가²,

가

13
2~3

가

가

가

가

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Initial Symptoms of Malignant Bone Tumors

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Purpose: Delay in the diagnosis of the primary malignant bone tumors may critically influence the chance of the patients' survival and the limb sparing, but the primary malignant bone tumors are so rare that most doctors have little experience in these challenging diseases. The purpose of the current study is to examine the initial symptoms of osteosarcoma and chondrosarcoma, and to shorten the delay of diagnosis.

Materials and Methods: The data was based on the questionnaires and the medical records from 139 patients whose histological diagnoses were confirmed in the authors' institution. There were 108 patients of osteosarcoma and 31 patients of chondrosarcoma. Eighty-six were male and fifty-three were female. The mean age of the patients was 20.2 years in osteosarcoma, and 42.4 years in chondrosarcoma.

Results: The most common symptom that the patient consult the doctor was pain (93.5% of osteosarcoma patients and 61.3% of chondrosarcoma patients). Among them, 76.2% of osteosarcoma and 57.8% of chondrosarcoma patients complained the night pain. The history of trauma was evident in 48.5% of osteosarcoma patients and one patient of chondrosarcoma. At the first medical visit, the malignant bone tumor was suspected in 61.1% of osteosarcoma and 64.5% of chondrosarcoma patients. Fracture was the most common misdiagnosis in osteosarcoma (16.7%), and the osteomyelitis in chondrosarcoma (19.4%). Initial radiographic examination and the adult age were shown to increase the rate of correct diagnosis of both diseases ($p < 0.05$). Patient's delay and doctor's delay were significantly longer in chondrosarcoma patients than in osteosarcoma. Initial radiography led to shorten the doctor's delay, and the axial location of the tumor lengthened the doctor's delay. Trauma and the young age were believed to shorten the patient's delay.

Conclusion: Careful history taking, including the night pain and trauma, would be mandatory for the early diagnosis of the primary malignant bone tumors, and the initial radiographic examination and periodic follow-up can increase the rate of correct diagnosis.

Key Words : Initial symptom, Osteosarcoma, Chondrosarcoma, Early diagnosis

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