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= Abstract =

A Case of *Escherichia Coli* Sternoclavicular Septic Arthritis

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Septic arthritis of the sternoclavicular joint is a rare condition. The predisposing risk factors include intravenous drug abuse, subclavian vein catheter placement, diabetes mellitus and trauma. Delayed or inadequate management can lead to irreversible joint damage with subsequent disability, even death. We report a 48-year-old female patient who presented with right sternoclavicular joint swelling and right shoulder pain. Magnetic resonance imaging of the sternum showed swelling of the right sternoclavicular joint with gadolinium enhancement. Synovial fluid and bone tissue culture revealed *Escherichia coli* (*E.coli*), and confirmed the diagnosis of sternoclavicular septic arthritis. She was successfully treated with surgical debridement and ciprofloxacin without recurrence. This is the first case report of *E.coli* sternoclavicular septic arthritis in Korea.

Key Words: Septic arthritis, Sternoclavicular joint, *Escherichia coli*

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서 론

,
(*Staphylococcus aureus*)
(1). 10%
(2).
,
(3). 1%
, , , ,
, (4).
(*Escherichia coli, E. coli*)
, ,
3 (5-7),
E.coli
.
48 *E.coli*
1
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증 례

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Fig. 1. Photograph shows focal redness and swelling over the right sternoclavicular joint.

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107/75 mmHg,
83 / , 20 / , 37.1°C .
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(1).
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, .
12,240/uL
(75.7%), 11.7 g/dL, 35.2%,
703,000/uL , 91 mm/hr,
C- 2.34 mg/dL .
8.1 g/dL, 4.0 g/dL, AST 36
IU/L, ALT 37 IU/L, 0.4 mg/dL, BUN 9.3
mg/dL, 0.75 mg/dL .
, .
, , -cyclic citrullinated peptide

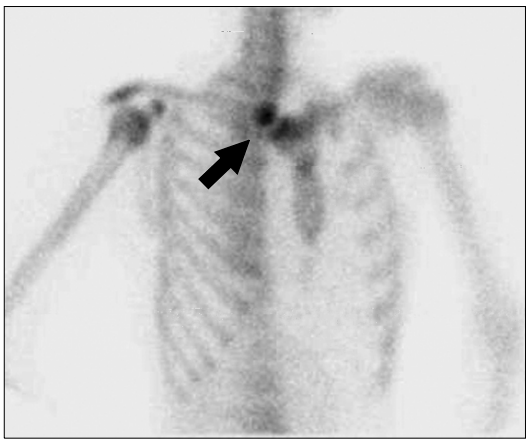


Fig. 2. Whole body bone scan revealed increased focal uptake in the right sternoclavicular joint (arrow), suggestive of arthritis.

, B
, C , HLA-B27 .
X- 23 mm/hr, C- 0.16 mg/dL
, X-
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(2),

(3).

E.coli
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(4),
E.coli .

, 5
E.coli

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10 , 2
. 3

고 찰

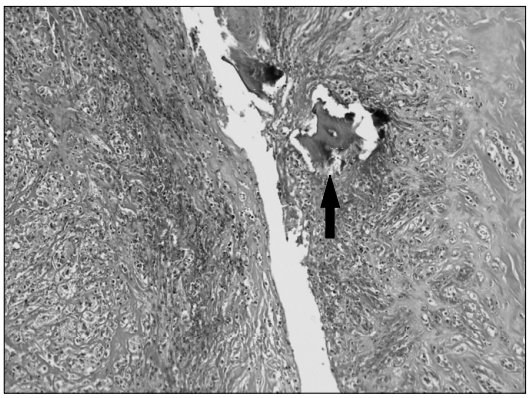


Fig. 4. Bone biopsy showed acute supurative inflammation, focal granulation tissue formation, giant cell reaction (arrow) and reactive bone formation (H & E stain, ×100).

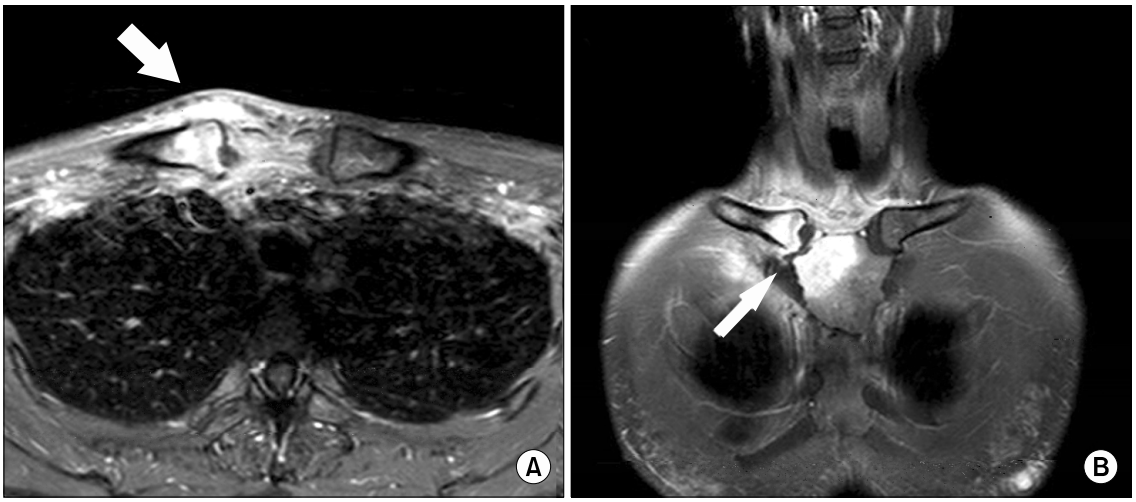


Fig. 3. MRI of the sternum showed swelling of the right sternoclavicular joint with gadolinium (arrow) and bone marrow enhancement of the proximal clavicle and sternum (A: axial view, B: coronal view).

, .
9～17% ,
. (*Pseudomonas*)
8～27% (*Enterobacter*), (*Klebsiella*), *E.coli*
(8,9). (2).
, , ,
, ,
, 10% *E.coli* .
E.coli
(10). , ,
, , , ,
, , , (13). *E.coli*
(11).
, , 3
. 1970
(3). 180
1% , 8 (5%) *E.coli*
17% (4).
. , , 8 3
, (methicillin-resistant) *Staphylococcus aureus*,
2 *Streptococcus*
(4). *E.coli* (12). *E.coli*
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, ,
8 2 ,
(12). (14).

, , ,
, ,
(15).
1%
. . *E.coli*

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Staphylococcus aur-
eus (*Streptococcus spe-* (15).
cies), , (*Neisseria species*),

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요 약

, *E.coli*

. 48

, *E.coli*

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참고문헌

1) Goldenberg DL. Septic arthritis. Lancet 1998;351: 197-202.
2) Goldenberg DL, Reed JI. Bacterial arthritis. N Engl J Med 1985;312:764-71.
3) Armbuster TG, Slivka J, Resnick D, Goergen TG, Weisman M, Master R. Extaarticular manifestations of septic arthritis of the glenohumeral joint. AJR Am J Roentgenol 1977;129:667-72.
4) Ross JJ, Shamsuddin H. Sternoclavicular septic arthritis: review of 180 cases. Medicine (Baltimore) 2004; 83:139-48.
5) Kim YT, Rhim CJ, Yim HS, Kim GS, Woo IS, Park YI, et al. A Case of Bilateral knee joint septic arthritis due to fluoroquinolone-resistant Escherichia coli in a leukemic patient. Korean J Infect Dis 1998;30:308-11.
6) Choi IH, Lee HK, Kim YM, Seong SC, Park YS, Shim JS. A clinical study on resistance and antibiotics of gram negative bone and joint infection. J Korean Orthop Assoc 1986;21:171-81.
7) Lee ES, Yang DW, Han SH, Kim DW, Jeon YB, Lee YY. A case of Escherichia coli induced septic arthritis of knee in a patient with liver cirrhosis. Inje Medical Journal 1997;18:321-6.
8) Jeng GW, Wang CR, Liu ST, Su CC, Tsai RT, Yeh TS, et al. Measurement of synovial tumor necrosis factor-alpha in diagnosing emergency patients with bacterial arthritis. Am J Emerg Med 1997;15:626-9.
9) Shmerling RH, Delbanco TL, Tosteson AN, Trentham DE. Synovial fluid tests. What should be ordered? JAMA 1990;264:1009-14.
10) Gupta MN, Sturrock RD, Field M. A prospective 2-year study of 75 patients with adult-onset septic arthritis. Rheumatology (Oxford) 2001;40:24-30.
11) Margaretten ME, Kohlwes J, Moore D, Bent S. Does this adult patient have septic arthritis? JAMA 2007; 297:1478-88.
12) Kim S, Lee HS, Kim KI, Cho SW, Kim HS, Shin HS, et al. The Clinical Results of Surgical Treatment for Sternoclavicular Septic Arthritis. The Korean Journal of Thoracic and Cardiovascular Surgery 2009;42:220-5.
13) Kaper JB, Nataro JP, Mobley HL. Pathogenic Escherichia coli. Nat Rev Microbiol 2004;2:123-40.
14) Goldenberg DL, Brandt KD, Cathcart ES, Cohen AS. Acute arthritis caused by gram-negative bacilli: a clinical characterization. Medicine (Baltimore) 1974; 53:197-208.
15) Robinson CM, Jenkins PJ, Markham PE, Beggs I. Disorders of the sternoclavicular joint. J Bone Joint Surg Br 2008;90:685-96.