Clinical Result of Meloxicam Treatment for Patients with Extra-Abdominal Desmoid Tumors

Yeong Kyoon Park[1], Hwan Seong Cho[1], Ilkyu Han[2], Han-Soo Kim[2]

[1]*Department of Orthopedic Surgery, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Korea*

[2]*Department of Orthopedic Surgery, Seoul National University Hospital, Seoul National University College of Medicine, Korea*

BACKGROUND: Extra-abdominal desmoid tumors are rare benign lesions. They can grow aggressively and invade into the surrounding tissues, which made surgeons resect them with a wide margin. Even though surgery remains the standard treatment for desmoid tumors, alternative attempts have been introduced because disfigurement and/or functional impairment resulted from wide resection. In addition, recurrence rate ranges from 30 to 40% even with wide resection. Alternatives include chemotherapy, radiotherapy, anti-estrogen agent, interferon, tyrosine kinase inhibitor and non-steroidal anti-inflammatory drugs (NSAID). Among alternative treatment options, NSAIDs would be well-tolerated with minimal adverse effects. However, the efficacy of NSAIDs for desmoids tumor has not been fully proven, despite promising results of recent studies on meloxicam, a COX-2 selective inhibitor, in extra-abdominal desmoid tumors.

PURPOSE: In this retrospective study, we evaluated 1) the efficacy of meloxicam for extra-abdominal desmoid tumors and 2) the correlation with efficacy and COX-2 expression.

MATERALS and METHODS: From September 2011 to September 2013, total of 43 desmoid tumor patients were treated. Among them, clinical results of treatment of 22 patients with extra-abdominal fibromatosis were followed, while 21 patients with plantar and palmar lesion were excluded. Their median age was 39.6 years (range, 16-76 years). Eleven (50%) were female and the rest were male. Briefly, the study comprised 22 patients, ten patients were surgically treated and twelve were initially treated with meloxicam. Of the ten patients who underwent surgery as initial treatment, 6 had no recurrence until the latest follow-up with the mean of 18.0 months. Four patients had recurrence at the mean follow-up of 7.5 months. For the recurred lesions, one patient underwent re-excision and had no recurrence afterward. Remaining 3 patients were given meloxicam. Fifteen patients, including 12 patients treated with meloxicam as initial treatment and 3 patients who had undergone surgery as the initial treatment and took meloxicam for recurred lesion, were monitored. The response to meloxicam was evaluated according to Response Evaluation Criteria in Solid Tumors (RECIST). Fisher's exact test was used to evaluate the correlation with efficacy with COX-2expression

RESULTS: Of the 15 patients treated with meloxicam, there were 6 patients with PR (Partial Response), 3 with SD (Stable Disease), and 7 with PD (Progressive Disease) according to RECIST at the last follow-up. Nine (60%) of the 15, patients had a status of SD or better. Surgical treatment was performed for six of 7 patients with PD.

The lesion of remaining one patient was inoperable because of the proximity to the brachial plexus, the brachial vessels, the lung, and cervical spines, and is currently on chemotherapy.

Immunohistochemistry showed positivity of COX-2 protein in 9 of the 15 patients. Fisher's exact test failed to show the correlation with COX-2 expression and responsiveness to meloxicam, even though positivity of COX-2 protein expression had the tendency of positive impact on prognosis ($P = 0.13$)

CONCLUSION: The wait-and-see strategy with meloxicam intake was effectual in about 60% of our series, although we could not conjecture that how much percent of patients visited clinicians in involuting phase and in how much percent of patients meloxicam did regress desmoid tumors. In addition, our results warrant further studies on 1) prognostic factors of responsiveness to COX-2 inhibitor to select appropriate patient, 2) dose and duration of medication, 3) long-term result of initial good responders, and 4) the effect of meloxicam treatment on overall oncological and functional outcomes in poor responders.