

Patient-centered care of de Quervain's disease

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Abstract

Purpose To test the hypothesis that most patients that elect symptomatic treatment of de Quervain's disease experience symptom resolution.

Materials and methods Eighty-three of 314 (26%) patients that elected initial symptomatic treatment of de Quervain's disease responded to a mail survey inquiring about symptom resolution, symptom duration, subsequent opinions and treatments, final impressions and comments.

Results Seventy-five respondents (90.4%) reported resolution of the pain, including 58 of the 61 (95%) respondents that elected neither corticosteroid injection nor surgery. Among patients with symptom resolution without injection or surgery 48 of 58 (83%) recalled symptoms for fewer than 12 months. The differences in reported average time to symptom resolution were not statistically significant between patients that elected or did not elect a corticosteroid injection.

Conclusions Considered in the light of important limitations of this data including the reliance on patient recall and the limited response rate to the survey, the data are still intriguing. At least in one surgeon's practice, most informed patients initially elect symptomatic treatment, and most experience symptom resolution within one year.

Keywords DeQuervain's syndrome · tendinosis · patient-centered care · shared decision making

Introduction

The management of de Quervain's disease is determined more by convention than scientific data. From the original description of the illness in 1895 until the first description of corticosteroid injection by Christie in 1955 [1], it appears that the only treatment offered was surgery [1–3]. Since approximately 1972 the prevailing opinion has been that of McKenzie (1972) who suggested that corticosteroid injection was the first line of treatment and surgery should be reserved for unsuccessful injections [4–12]. However, data regarding the efficacy of corticosteroid injection is sparse and uncontrolled (Oxford Level of Evidence 4) and it is not clear that there is a benefit over the natural history of the illness. A structured review published in 2003 identified only 35 publications that addressed de Quervain's on Medline, only 7 of which presented data regarding corticosteroid injection, and none of which were controlled studies [13].

Retrospective studies all report success rates for corticosteroid injection greater than 70%, but the one prospective cohort study that we are aware of noted a success rate of only 58% and many of those patients took 12 to 18 months until symptom resolution [10]. While the authors of that study ascribed the failure of corticosteroid injection to anatomical variations, it has not been clearly established that corticosteroid injection is better than placebo or that a symptom course of 12 to 18 months is any better than the natural course of the illness.

Another commonly used criterion for failure of non-operative treatment is election of operative treatment, but the decision to operate is complex and biased by the beliefs and emotions of the surgeon and the patient. Use of an elective event such as surgery to define success makes data regarding nonoperative treatment difficult to interpret. For instance, in one of the two investigations in which a substantial number of patients were treated without injection (splints and anti-inflammatory medication alone were used), a remarkable 45 of 93 (48%) of patients in all non-operative treatment groups had surgery [11].

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This may simply reflect frustration on the part of both the patient and the surgeon with the prolonged symptom course associated with the disease. It may appear to both patient and surgeon that, after many months of symptoms, the illness will never resolve. The data of Lane and colleagues [14] indicating that non-operative treatment is successful only in mild cases is similarly marred by the lack of patients randomly assigned to alternative treatments and the use in many patients of a decision for surgery as a failure criterion.

Based upon this critical review of the relatively sparse and low level of scientific data regarding the treatment of de Quervain's disease, combined with observation of spontaneous symptom resolution over approximately one year in many patients that did not want injection or surgery, the senior author of this paper has developed a patient-centered, shared decision-making approach to the treatment of de Quervain's. The basic understanding conveyed to patients with this approach was that de Quervain's disease is benign, likely self-limited (since the illness does not have the epidemiology of an unresolving condition such as arthritis), and that interventions in the form of corticosteroid injection or surgery are elective and the patient should be involved in the decision to pursue them.

The senior author has observed that the majority of patients offered this patient-centered approach initially opt for palliative treatments such as splinting and non-narcotic pain medications rather than potentially curative treatments such as corticosteroid injection or surgery. The purpose of this study was to determine the percentage of patients treated under this shared decision-making approach with symptom resolution greater than one year after presentation by survey, while accounting for other treatments elected during this time course.

Materials and methods

A consistent protocol was used to treat 355 patients with de Quervain's tendinosis treated by a single hand surgeon (the senior author) between 1999 and 2006. Based upon the senior author's interpretation of the limited scientific evidence in combination with experience in patient care patients were informed of the opinion that: 1. The disease seems to be a self-limited chronic tendinosis (not tendonitis) that causes symptoms for approximately 12 months +/- six months in the majority of patients, and that once it resolves it is unlikely to return; 2. This condition is a nuisance, not a danger, and problems such as tendon rupture are extremely rare; 3. The pain associated with this problem does not indicate any form of damage or neglect and patients are free to choose their comfort and activity levels. Patients were provided a removable forearm based, thumb spica splint to use as desired for palliation of symptoms. They were advised that a several

week trial of full time splint wear, a several week trial of round the clock non-steroidal anti-inflammatory medications, and injection of corticosteroids into the first dorsal compartment (among other nonoperative treatments) are all commonly used and could be considered, but that there was little evidence that any of these treatments could shorten the natural course of the illness. They were advised that surgery could resolve the problem quickly and with a high success rate, but that there was a very small chance of permanent complications such as injury to the radial sensory nerve. Once so informed, the patient and surgeon came to a mutual agreement on all subsequent treatment decisions according to the principles of shared decision-making or patient-centered care.

The Human Research Committee at our hospital approved a protocol including review of the medical records and a mail survey of subsequent illness course. Among the 93 total usable surveys returned, 10 patients (11%) had requested surgery from the index surgeon at the initial visit and all 10 patients reported rapid resolution of symptoms and satisfaction with treatment (Table 1). Two of these 10 patients commented that they wish they had elected surgery sooner. Since we were most interested in symptom resolution and subsequent treatment in patients that initially elect non-operative treatments, we decided to exclude patients that had elected operative treatment.

Forty-one patients (11.5% of the total of 355 patients) requested surgery from the index surgeon. A minimum of one year after presentation, the 314 patients that did not request surgery from the index surgeon were mailed a survey that included seven questions concerning the status of the illness and whether any additional medical care was pursued. The seven questions were as follows: (1) Did your pain completely resolve? (2) What was the total duration of your pain? (3) Did you get another opinion? (4) Did you have a corticosteroid injection? (5) Did you have surgery? (6) What do you believe finally cured your problem? and (7) Do you have any comments? Addressed and stamped return mail envelopes were included with the survey. As stated on the survey, completion and return represented informed consent.

From the total of 314 patients, 40 were returned for incorrect address, 35 declined participation, and 156 patients did not reply. Eighty-three patients (26%) returned a usable questionnaire.

Results

There were no significant differences between respondents and non-respondents with respect to age, gender, or initial treatment election. The response rate was typical of other survey studies that we have performed.

Eleven of 83 (13%) respondents that initially elected nonoperative treatments requested and received a corti-

costeroid injection at the initial visit and the remaining 72 patients initially elected palliative treatment only (splint, pain relievers). Four of the patients that requested an injection at the initial visit requested additional injections at subsequent visits, one with another doctor. Ten of 72 (14%) patients requested an injection at subsequent visits, three with another doctor (Table 1). A total of 21 patients had an injection at some point in their care. Two patients that received injections and 1 other patient (total 3 of 83 patients) eventually requested surgery. Overall, 61 of 83 respondents that initially declined surgery (73%) elected only palliative treatments (splint), 19 (23%) had injections but no surgery, and 3 (4%) elected surgery after the injection did not relieve their symptoms.

According to initial treatment election

Symptom resolution was reported by all 10 patients that initially elected operative treatment had symptom resolution (100%), 7 of 11 patient that initially elected cortisone injection (63%), and 68 patients that initially elected splint treatment (94%) (Table 1).

According to symptom resolution

Eight respondents (10%) reported persistent pain attributed to de Quervain's disease, one after corticosteroid injections and surgery by another surgeon and 4 after corticosteroid injections (one by another physician). Seven of the 8 respondents reporting persistent symptoms reported several years of symptoms.

Among the 75 respondents (90%) that reported resolution of the pain, 2 had been treated operatively by other surgeons (one had 2 surgeries), and 16 had a corticosteroid injection at some point during treatment (4 by another physician). Among the 16 patients that improved and had corticosteroid injection, only 4 ascribed symptom resolution to the injection (8 ascribed relief to time, 2 to splints, one to a job change, and one to ultrasound). Corticosteroid injections had been elected significantly more often in patients that did not have symptoms resolution by the time of the survey than in patients that had recovered (5 of 8 compared to 16 of 75 respectively; $P = 0.02$ Fisher's Exact Test).

Fifty-eight of the 61 (95%) respondents that elected neither corticosteroid injection nor surgery at any time during treatment reported resolution of symptoms. Among the 58 patients with symptom resolution without injection or surgery, 33 recalled symptoms for fewer than 6 months, 15 for between 6 and 12 months, and 10 for a year or greater. Among the 16 patients with symptom resolution after injection, 7 recalled symptoms for fewer than 6 months, 7 for between 6 and 12 months, and 2 for greater than 1 year. The differences in reported average

time to symptom resolution were not statistically significant between patients that elected or did not elect a corticosteroid injection. None of the patients that experienced symptom resolution reported symptoms for greater than 2 years, regardless of treatment.

Patient comments

In the comment section, 8 of the 58 patients (14%) that reported resolution of the pain without surgery commented that they were glad that they waited and, in the words of a few, were not 'rushed into surgery'. Three patients with resolution of symptoms (4%) that had injections (2 done by other doctors) commented that they wished they had tried the injection sooner. One patient with resolution of symptoms that had surgery elsewhere (1%) commented that they wished they had done it sooner. Eleven patients made comments supportive of the patient-centered approach taken by the index surgeon primarily because they were happy to have the opportunity to avoid surgery and just wait the illness out. Eight patients were critical of the approach, primarily on the grounds that potentially curative treatment should have been recommended more strongly.

Discussion

Considered in the light of important limitations of this data including the reliance on patient recall and the limited response rate to the survey (making it possible that respondents were either doing better or worse than the average patient), the data are still intriguing. The idea that de Quervain's is self-limited is not widely held or considered, but only 8 patients (10%) reported persistent symptoms at the time of the survey. Even more remarkably, among the 61 patients that did not elect corticosteroid injection or surgery at any time during treatment, 58 (95%) reported symptom resolution. This of course raises the possibility that there may be differences (both physical and psychosocial) between respondents that elected corticosteroid injection or surgery and those that chose to manage the symptoms and wait. In spite of all the limitations of these data, they do support the concept that in most patients, de Quervain's disease is self-limited—a concept that is further supported by the fact that this illness does not have the epidemiology of an illness that is unremitting without treatment, such as arthritis—namely greater prevalence with age.

There was substantial variation in the duration of symptoms from de Quervain's disease, but none of the respondents that reported symptom resolution had symptoms for greater than 2 years. The surgeon's initial admonition that resolution would occur in approximately 12 months \pm 6 months in most patients seemed accurate in

the 90% of patients that did experience symptom resolution within the study period. Since the patients that did not experience symptom resolution were not evaluated in person, it is possible that some of these patients had persistent pain from an illness other than de Quervain's–trapeziometacarpal arthritis, for instance. In other words, the rate of symptom resolution among respondents may be higher than documented according to patient self-report. Of course, the rate of symptom resolution within the study period might also turn out to be much lower overall if the rate of symptom resolution was particularly low among survey nonresponders.

Among respondents, having a corticosteroid injection was associated with a significantly higher chance of reporting persistent symptoms. Furthermore, patients that experienced symptom resolution did not report more rapid resolution of symptoms after corticosteroid injection. These data are intriguing even though they represent relatively weak and circumstantial evidence that corticosteroid injections may not be as effective as many of us believe. More definitive evidence would require a double blind prospective randomized controlled trial of corticosteroid vs. placebo injection. Based on our observations as well as those of others as described in the introduction to this paper, we feel that such a trial is warranted.

As might be expected, there were several patients (8 of 83; 10% of respondents) that commented that they would have preferred a more interventional and paternalistic approach than the shared-decision making offered by the index surgeon. We speculate that this is a subset of patients that tends to seek a quick solution to their problem and are likely to be unsatisfied with anything less, but we do not know how these patients differ from the 11% of the initial 93 respondents that requested surgery and the 14% that requested a corticosteroid injection from the index surgeon. Making the decision to pursue a specific intervention for oneself after education from the surgeon is likely to be different in important ways from having a surgeon make a strong and confident recommendation in favor of a specific intervention. These differences in how patients make treatment decisions merit further study.

On the other hand, there were several patients (11 of 83; 13%) that offered comments in favor of the shared decision-making approach of the index surgeon, primarily because it allowed them to avoid surgery and still experience symptom resolution. No matter how much a surgeon

believes in the effectiveness of either corticosteroid injection or surgery, the principles of shared decision making and patient-centered care would seem to obligate a suggestion to patients that symptomatic treatment alone is a viable option for illnesses such as de Quervain's that are benign and apparently self-limiting in most patients.

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