# Occurrence of de Quervain's Disease in Postpartum Women

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De Quervain's disease (syndrome, tendinitis, tenosynovitis, tendovaginitis) is stenosing tenosynovitis of the abductor pollicis longus and extensor pollicis brevis tendons at the radial styloid process. These two tendons, within their common sheath, comprise the first compartment of the dorsal carpal ligament at the wrist. The osseofibrous tunnel through which these tendons pass is normally somewhat constricting. When inflammation in the form of tenosynovitis is present, restriction to smooth motion becomes greater and pain develops.[1,2]

The diagnosis of de Quervain's disease is generally made clinically and is rarely confused with other diagnoses. Examination of the affected wrist reveals tenderness to palpation and occasionally localized swelling over the radial styloid process. Pain at the radial styloid is increased by full flexion of the thumb and forced ulnar deviation of the wrist, a maneuver known as Finkelstein's test.[3,4] The condition may resolve without medical intervention or after treatment with a wrist splint, anti-inflammatory medications, injection of steroid into the tendon sheath, or surgery.

Although the majority of patients with de Quervain's disease are likely to present to primary care physicians, all previously reported series of patients have been submitted by surgeons. The incidence of the disease in the general population is unknown. De Quervain's disease is diagnosed much more commonly in women than in men. Although direct trauma can be a cause, many cases are the result of repetitive motion at the wrist; in others the cause is not clear. In a review by Faithfull and Lamb,[5] the dominant hand was affected no more often than the nondominant.

McFarland[1] noted that a number of women in their last trimester of pregnancy or who were nursing mothers developed de Quervain's disease. Schumacher et al[6] reviewed six cases of de Quervain's tendinitis occurring after the fifth month of pregnancy. Five of the six continued to have symptoms postpartum. All five were breast-feeding their babies. Most recently, Schned[7] identified five cases of de Quervain's disease presenting in the third trimeseter and one presenting in the second trimester. Four patients had ongoing symptoms after delivery. The number who were breast-feeding was unclear.

This report describes six cases of de Quervain's disease in postpartum women who presented to the Department of Family Practice at the University of Kansas Medical Center from 1981 to 1987. Only eight other patients with de Quervain's disease were identified from computer-coded diagnoses of clinic visits during that same period. In six of the eight, the cause was thought to be direct trauma or overuse. No cases of de Quervain's disease presenting in pregnancy were found.

## Illustrative Cases

*Case 1.* A 25-year-old woman was asymptomatic when she visited the Family Practice Clinic for routine examinations 1 month and 2 months postpartum after a normal vaginal delivery. Her pregnancy had been complicated by preeclampsia with proteinuria. The patient was breast-feeding. At 3½ months postpartum the patient came to the clinic with a chief complaint of pain in the right wrist of 2 weeks' duration. She was right-handed and having great difficulty writing. She had wrapped her wrist with an elastic wrap but the pain did not decrease. She had taken no medications. The diagnosis of de Quervain's disease was made on the basis of exquisite tenderness over the radial styloid process and a positive Finkelstein's test. Acetominophen was suggested for pain relief, and she was to return if the pain continued. The pain increased. She was placed on acetominophen with codeine, and a number of wrist splints were tried unsuccessfully over the next 2 months. When she was seen 4½ months postpartum because of increasing pain, the tendon sheath was injected with a 0.5-mL suspension of equal volumes of 1% xylocaine and triamcinolone. She also discontinued breast-feeding. The pain resolved and has not recurred in 5 years of continued follow-up.

*Case 2.* A 25-year-old breast-feeding woman came into the Family Practice Clinic at 3½ months postpartum with a chief complaint of vaginal burning. In the course

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of the visit she also mentioned pain in her right wrist that had been present for 2 weeks as well as chest wall pain that had previously been diagnosed as costochondritis. Examination of the right wrist revealed tenderness directly over the radial styloid and crepitus on rotation of the wrist. An x-ray examination of the wrist was obtained, which showed no abnormalities. Ibuprofen, 400 mg four times a day, was prescribed for the wrist pain, which was thought to be de Quervain's tendinitis. On an unrelated visited 2 months later the wrist pain had resolved. She was no longer breast-feeding.

*Case 3.* A 35-year-old breast-feeding woman had no complaints when she was seen for her postpartum examination 1 month following delivery by cesarean section. Five months postpartum she returned to the Family Practice Clinic for contraceptive advice. She also mentioned that she had had bilateral wrist pain for some time as well as pain in her left shoulder. The pain was exacerbated by lifting her baby. Examination was consistent with a diagnosis of bilateral de Quervain's tendinitis and left bicipital tendinitis. She was urged to avoid lifting her child when possible, and naproxen, 500 mg twice a day, was prescribed. She was not seen again for these complaints, which had resolved at the time of her 1-year postpartum examination. She had discontinued breast-feeding in the interim.

*Case 4.* This 28-year-old woman was 4 months postpartum, not breast-feeding, when she presented to the Family Practice Clinic with vaginal complaints. She also complained of a painful left wrist, which had not been noted at her postpartum examination 2 months previously. There had been no history of injury to the wrist. Her only medication was a combined oral contraceptive pill. Examination of the left wrist revealed a positive Finkelstein's test and tenderness to palpation over the radial styloid. The diagnosis of de Quervain's tendinitis was made, and ibuprofen, 800 mg three times a day, was prescribed. The patient was seen in follow-up 2 weeks later with increasingly severe wrist pain. She was placed in a wrist splint and the ibuprofen was continued. There has been no further follow-up in the clinic.

*Case 5.* A 23-year-old non-breast-feeding woman first noted bilateral wrist pain shortly after the birth of her child, but sought no medical attention until 9 months postpartum. The pain in the right wrist had resolved, but the left wrist continued to be painful, especially when unscrewing a lid from a jar. On examination, Finkelstein's test was positive and de Quervain's tendinitis was diagnosed. She was given a prescription for diflunisal, 500 mg twice a day, and was asked to follow up in 2 weeks. On the next visit to the Family Practice Clinic, she noted minimal improvement in the pain. The medication was continued, and a splint was placed over the patient's left wrist. When she was next seen 3 months later, the pain had resolved.

*Case 6.* This 28-year-old woman had experienced 1 month of pain in the left wrist when she presented to the Family Practice Clinic at 6 months postpartum. She had never breast-fed her baby. She denied any trauma but described increased pain when carrying her baby in her left arm. There was a positive Finkelstein's test on the left wrist, and the diagnosis of de Quervain's tendinitis was made. Her wrist was placed in a splint, and naproxen, 500 mg twice a day, was prescribed. Two weeks later she was no better and was unhappy with the splint. A new splint was formed, and the medication was changed to indomethacin, 75 mg of sustained-released preparation twice a day for 1 week, at which time she was seen again. The wrist still hurt and the splint was still uncomfortable. A new splint was formed in the orthopedic supply shop, and she was referred to a hand surgeon. Wrist examination in the Hand Clinic 2 weeks later revealed discrete tenderness over the first dorsal compartment and a prominent left radial styloid. The Finkelstein's test was markedly positive. The diagnosis of de Quervain's tendinitis was confirmed. The first dorsal compartment was injected with a 0.5-mL suspension of 2% xylocaine, betamethasone, and triamcinolone, resulting in immediate symptomatic relief. At an unrelated visit 3 months later, she was free of wrist pain. At 1-year postpartum, the patient again presented to the Hand Clinic with 2 months of pain in the right wrist. De Quervain's tendinitis was diagnosed for the right wrist, and a similar injection resulted again in resolution of the pain. After 1 year of follow-up, she remains pain free.

## Discussion

Six cases of postpartum women with de Quervain's disease have been reviewed. These are summarized in Table 1. Three of the six patients were breast-feeding at the onset of symptoms. Previously, McFarland[1] had noted that in breast-feeding women with de Quervain's disease, symptoms often cleared after lactation ceased. Schumacher et al[6] reported persistent tendinitis until after nursing was discontinued in two untreated patients. A third patient who continued to breast-feed still had symptoms at the time Schumacher's review was presented. None of the three breast-feeding patients reported here had documented persistence of disease after discontinuing nursing; on the other hand, the precise relationship of cessation of symptoms to cessation of breast-feeding was not discernible from the patient charts.

Keon-Cohen[8] postulated that de Quervain's disease in postpartum women may be due to the position of the

Table 1. Summary of Six Cases of Postpartum de Quervain's Disease

| Case | Age (y) | Onset of Symptoms (mo postpartum) | Breast-feeding at Onset of Symptoms? | Effective Therapy |
|---|---|---|---|---|
| 1 | 25 | 3½ | Yes | Steroid injection: discontinued breastfeeding |
| 2 | 25 | 3 | Yes | Ibuprofen; discontinued breastfeeding |
| 3 | 35 | 4-5 | Yes | Naproxen; discontinued breastfeeding |
| 4 | 28 | 4 | No | Ibuprofen; wrist splint |
| 5 | 23 | 1 | No | Diflunisal; wrist splint |
| 6 | 28 | 5 | No | Steroid injection |

thumb in abduction for extended periods while holding the baby. In Schned's series,[7] five of six women volunteered that physical activities involving infant care aggravated their symptoms. Three of the women in this study reported that their pain was exacerbated by carrying their infants; there is no documentation that the other three were asked.

The subset of peripartum and breast-feeding women is much younger than the overall average of patients with de Quervain's disease. Whereas all of the women in the series of Schumacher et al and Schned were aged between 23 and 37 years, the average age of 80 patients reviewed by Faithfull and Lamb[5] was 55 years.

If one were to speculate on a hormonal association in peripartum women with de Quervain's disease, the hormone most likely to be implicated would be prolactin. Not only is this hormone elevated in nursing women, but it begins to rise in the eighth week of pregnancy, peaking at 10 times the nonpregnant level at term. Seven days after delivery, prolactin levels reach normal nonpregnant levels in non-breast-feeding women. In breast-feeding women the basal level declines more slowly, reaching normal at 3 to 4 months. There continues to be a pulsatile increase with suckling, however, essential for continued milk production.[9,10]

Prolactin levels may also be elevated in patients taking tricyclic antidepressant medications[11] and those on oral contraceptives.[12,13] In the future it would be interesting to draw prolactin levels in non-breast-feeding patients with de Quervain's disease.

In conclusion, patients with de Quervain's disease are likely to present to the family physician, often with wrist pain as a secondary complaint. The typical findings should not be overlooked in peripartum women. Breast-feeding women with de Quervain's disease might be alerted to the suggestive evidence that symptoms may persist until breast-feeding is discontinued, but the group as a whole can be treated conservatively with an excellent prognosis for resolution of the disease without surgery.

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