here means that South Africa must be included in the increasing list of countries where analgesic abuse plays an important part in the aetiology of chronic renal failure.

The effect of climate on the aetiology of the condition is difficult to assess. Kincaid-Smith[15] suggested that high climatic temperatures may predispose to dehydration and so precipitate acute renal failure. The condition is apparently more common in Queensland than in other parts of Australia and occurs more frequently in the summer months than in winter in Melbourne. By contrast the condition appears to be more common in northern than in southern Europe, where mean temperatures are considerably higher. Johannesburg is situated on the reef in the Transvaal 5,750 ft (1,750 m) above sea level and enjoys a sunny climate. Humidity is low all the year round and falls to around 10% in the winter. The winter months May to August are often without rain. By contrast the summer is a wet season, with short, heavy storms. Because of the altitude summer temperatures seldom exceed 85°F (average 74°F) (29·4°C, average 23·3°C) and in the winter average 52°F (11·1°C). The initial presentation of our patients occurred at any time of the year (Fig. 2), and this does not suggest that climatic conditions play a major part in the pathogenesis of the condition.

It is generally reported that timely withdrawal of analgesics results in clinical and biochemical improvement and that early diagnosis is life-saving.[15 17] World figures suggest that the mortality rate in analgesic nephropathy varies between 20 and 30%.[12 14 16] In our series 29 of the patients followed up (51%) reached end-stage renal failure. Nevertheless, of those who survived with follow-up of 6 to 96 months only three showed any deterioration. The remainder either improved or were static. The overall prognosis of this series, therefore, was generally worse than in other reported series. Analysis of differences between those who deteriorate or improve suggest that the severity of the disease at presentation and possibly the presence of hypertension may be the most important factors in determining the outcome. The reasons why analgesic nephropathy should have a worse prognosis in South Africa than has been reported elsewhere are not apparent from this study.

References

1 Spuhler, O., and Zollinger, H. U., *Zeitschrift für klinische Medizin*, 1953, 151, 1.
2 Ross, P., *Medical Journal of Australia*, 1962, 2, 639.
3 Shelley, J. H., *Clinical Pharmacology and Therapeutics*, 1967, 8, 427.
4 Canada. Dominion Bureau of Statistics, Cat. No. 46-209 (1950-64).
5 Canada. Dominion Bureau of Statistics, Cat. No. 65-007 (1946-65).
6 Abrahams, C., Rubenstein, A. H., and Levin, N. W., *Nature*, 1963, 200, 695.
7 Abrahams, C., Rubenstein, A. H., Levin, N. W., and Wunderlich, U., *Archives of Pathology*, 1964, 78, 222.
8 Abrahams, C., and Levin, N. W., *Medical Proceedings*, 1967, 13, 501.
9 Abrahams, C., and Levin, N. W., *Lancet*, 1968, 1, 645.
10 Lindvall, W., *Acta Radiologica*, 1960, Suppl. No. 192, 112.
11 Dawborn, J. K., Fairley, K. F., Kincaid-Smith, P., and King, W. E., *Quarterly Journal of Medicine*, 1966, 35, 69.
12 Gault, M. H., Rudwal, T. C., Engles, W. D., and Dosseter, J. B., *Annals of Internal Medicine*, 1968, 68, 906.
13 Fairley, K. F., and Kincaid-Smith, P., *British Medical Journal*, 1968, 1, 156.
14 Koutsaimanis, K. G., and de Wardener, H. E., *British Medical Journal*, 1970, 4, 131.
15 Kincaid-Smith, P., *Medical Journal of Australia*, 1969, 2, 1131.
16 Bell, D., Kerr, D. N. S., Swinney, J., and Yeates, W. K., *British Medical Journal*, 1969, 3, 378.
17 Steele, T. W., and Edwards, K. D. G., *Medical Journal of Australia*, 1971, 1, 181.

Conservative Treatment of de Quervain's Disease

JEAN M. M. McKENZIE

British Medical Journal, 1972, 4, 659–660

Summary

Thirty patients with de Quervain's disease were treated by injection of hydrocortisone acetate and lignocaine. A 93% incidence of complete relief of symptoms was obtained after 18 months. It is recommended that this is the treatment of choice before resorting to surgery.

Introduction

The treatment of stenosing vaginitis of the common synovial sheath of the extensor pollicis brevis and abductor pollicis longus (de Quervain's disease) has often been described. Most authors advocate surgery as the treatment of choice.[1–4] Woods[5] went so far as to state that once the diagnosis is made immediate operation should be performed. He also stated that conservative treatment only lessens the symptoms for a brief period and has no lasting value. Other workers[1] believe that all forms of treatment except surgery are largely ineffective.

The purpose of this paper is to prove that injection of hydrocortisone acetate into the sheath using the correct technique produces dramatic and lasting relief of symptoms and that surgery is rarely necessary.

Peterborough District Hospital, Peterborough PE3 6DA
JEAN M. M. McKENZIE, F.R.C.S., D.PHYS.MED., Consultant Physician in Physical Medicine and Rheumatology

Present Series

Between 1966 and 1968 30 cases of de Quervain's disease were seen and treated in the department of physical medicine. The patients (25 women, 5 men) were aged between 25 and 74 years. Symptoms varied from moderately severe pain, worse on movement, to excruciating pain causing severe disability. Duration of symptoms varied from five weeks to nine months. On examination the classical signs as described by de Quervain[6] were found. In eight cases there was a visible or palpable swelling. The presence of a swelling was not related to the duration of symptoms.

TREATMENT

Once the diagnosis was made all patients received an immediate injection into the synovial sheath of 25 mg hydrocortisone acetate and 1 ml of 2% lignocaine mixed in the same syringe. The advantages of using a rapidly acting local anaesthetic are twofold. Symptoms are relieved almost immediately and the efficacy and accuracy of the injection can be assessed.

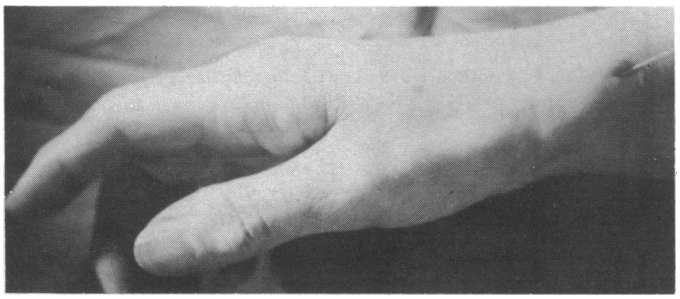
All patients were seen two weeks after the initial injection. If relief of symptoms was not complete or any pain or tenderness could be elicited a second injection was given. These patients were again seen after two weeks. All patients were reviewed 12 weeks after injection.

TECHNIQUE

The forearm is placed in midpronation with the thumb-nail facing upwards. A small pad is placed under the wrist to produce

slight adduction. After cleansing the skin the needle is inserted into the sheath on the dorsal side of the tendons at the point of maximal tenderness. If there is any doubt about the site of injection the patient can be asked to extend the thumb against resistance, when the tendons will stand out clearly. Usually the needle point can be felt entering the thickened sheath, but if there is any uncertainty it is recommended that the point be inserted until it is felt to touch the lateral surface of the radius. With the operator's thumb applying gentle pressure to the plunger the needle is slowly withdrawn. When the fluid begins to flow freely through the needle the point of the needle is undoubtedly in the sheath. The amount of fluid which flows varies according to the amount of thickening of the sheath, but there is always the initial free flow as the sheath is entered.

The synovial sheath usually terminates at the base of the thumb metacarpal though often it is prolonged to the insertion of the abductor pollicis brevis into the base of the proximal phalanx. This can be readily seen as the sheath fills during the injection (see Fig.).



Filling phenomenon observed with needle in situ on dorsal side of extensor pollicis brevis and abductor pollicis longus.

In my experience whenever this filling phenomenon occurs a second injection is rarely necessary. It occurred in 65% of the patients in this series and all of them received only one injection and none had a recurrence of symptoms. It is assumed that when this does not occur this is due to gross stenosis, possible adhesions, or anatomical variations of the sheath. It was not always necessary to re-inject even when the filling phenomenon did not occur. The injection must be assessed as successful only if the patient is symptom-free, if there is no tenderness on palpation, and if pain cannot be produced on passive movements five minutes after the injection. These criteria were present in all the patients in the series. When seen two weeks later, however, five patients were not completely symptom-free, although all of them admitted to being vastly improved.

On the assumption that failure of complete relief is due to the existence of two synovial sheaths or some other anatomical variation[7] the site of the second injection differed from the first. On this occasion the needle was inserted into the sheath on the flexor side of the tendons, applying the same technique as before.

Results

When reviewed at two weeks 25 of the 30 patients were completely symptom-free. The remaining five had residual symptoms but all admitted to great improvement. A second injection was given to four. The fifth, a man, had previously had operative treatment for a similar lesions in the other limb and declined a further injection, insisting on surgical treatment. He was the only patient in the series referred for surgery.

Of the remaining patients two were completely free of pain when seen after a further two weeks. One patient complained of mild aching after prolonged use of the hand but did not consider her symptoms severe enough to warrant a further injection. The fourth patient, a woman of 74, complained of weakness of grip but had no pain. On examination no weakness could be shown.

Twenty-nine patients were seen 12 weeks after injection. Twenty-seven remained free of symptoms and signs apart from the thickening that was present in eight patients. The patient who had complained of mild aching continued to do so, but again did not think her symptoms were severe enough to warrant a further injection. The symptoms of the patient complaining of weak grip were also unchanged but no local or systemic cause was found. She remained free of pain.

Twenty-eight patients were seen after 18 months. One patient was reviewed by post and stated that she had remained symptom-free, and the patient who had complained of mild aching had become symptom-free. The patient who complained of weakness of grip continued to do so. One patient who had been symptom-free at 12 weeks had had a recurrence some three months before review. A further injection was given.

Thus after 18 months 27 of the 30 patients were symptom-free and one, the 74-year-old woman, had no pain but professed weakness, which in no way incapacitated her.

Discussion

De Quervain's disease is a painful and often disabling condition which is readily amenable to treatment. It has frequently been stated that immediate surgery should be carried out on the grounds that the operation is quick and simple. This is undoubtedly so, but an even simpler treatment which carries a 96% success rate is preferable to surgery. Woods,[5] in a series of 36 cases, claimed 83% as symptom free, compared with 93% in this series.

The exact aetiology of de Quervain's disease is not known, though the onset is often but not invariably associated with unaccustomed use of the hand. It is, however, acknowledged to be an inflammatory condition.[2] Corticosteroids are known to be among the most potent anti-inflammatory agents, so that logically hydrocortisone should be the initial treatment of choice. Probably the previous reported poor results with this treatment were due to faulty technique. Correct technique, which is possible with minimal practice, is all important. As shown in this series, correctly administered hydrocortisone provides comparable if not better results to those of surgery.

Injection, as described, is recommended as the treatment of choice in de Quervain's disease, and only in the event of failure of this treatment should surgery be advised.

I wish to express my gratitude to Dr. H. Rhys Davies, of the Watford District Hospital, for allowing me to report on these patients, all of whom were under his care.

References

[1] Younghusband, O. Z., and Block, J. D., *Canadian Medical Association Journal*, 1963, 508, 89.
[2] Lamphier, T. A., Crooker, C., and Crooker, J. L., *Industrial Medicine and Surgery*, 1965, 34, 847.
[3] Manes, E., and Svaini, R., *La Chirurgia Degli Organi Di Movimento*, 1969, 58, 166.
[4] Janssen, J. T., and Teasley, J. L., *Wisconsin Medical Journal*, 1970, 69, 95.
[5] Woods, T. H. E., *British Journal of Surgery*, 1964, 51, 358.
[6] Quervain, F. de, *Korrespondenzblatt für schweizer Arzte*, 1895, 25, 389.
[7] Leno, L., *Journal of Bone and Joint Surgery*, 1958, 40A, 1063.