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ULTRASONIC TREATMENT OF EPICONDYLITIS HUMERI

By

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Epicondylitis humeri is an aseptic inflammation of the tendons of caput commune extensorum (lat.) or flexorum (med.). Occurence of lateral localization is the most frequent. Periostitis, bursitis and, in rare cases, synovitis in the elbow joint can be complications connected with the inflammation of the tendons.

The symptoms of the disease are soreness and possible tumour localized in caput commune but no limitation of movement of the elbow joint. Generally, the pains do not occur when at rest. Contraction of muscles, for instance clenching of the hand, causes distinct pain.

Epicondylitis is generally caused by excessive use of the muscles of the forearm and is frequently found in housewives. However, it can also be caused by tennis and golf, the reason for its popular names: tennis- and golfer's elbow. In some cases, trauma can be the etiological factor.

Epicondylitis can disappear spontaneously or it can be treated with immobilization, heat (short wave, ultrasound), massage, injections with local anaestheics or steroids (*Wetterfors, Huth et al.*), X-ray therapy and possibly operation (*de Goés & Silva*).

Ultrasonic treatment of epicondylitis has been reported by *Aldes* (1955) who treated 36 patients. Of these, 31 were cured after 6 to 10 sessions. Concomitant injections of hydrocortisat in other patients gave still better results.

The u.s.-intensities which we have used are 0.8 watt/cm^2 and the frequency 870 kHz (Siemens Sonostat 631).

PERSONAL INVESTIGATIONS

The purpose of our investigations has been to find the effect of ultrasonic treatment of epicondylitis humeri.

TABLE 1

Treated	No. of patients	No. of treatments	No. of treatments per patient	No. of treatment days per patient	Unchanged	Improved	Recovered	Improved + recovered
every day	10	86	9	9	1	4	5	9
every other day...	6	53	9	18	1	2	3	5
	16	139			2	6	8	14

The material consisted of 16 patients with epicondylitis humeri treated at the Department of Physical Medicine and Rehabilitation, Rigshospitalet, Copenhagen, during the last two years.

The age of the patients varied from 18 to 67 years, with a mean age of about 50 years. There were 10 women and 6 men. In 3 cases, the disease was caused by trauma, and in the remaining, by repeated working stress.

In 7 patients, the symptoms were right-sided, in 8 patients left-sided and in 1 patient both right- and left-sided. In 8 patients, the localization was lateral, in 4 patients medial and in 4 patients bilateral. The symptoms had been present from two weeks to two years. U.s. treatment has been given daily and every other day.

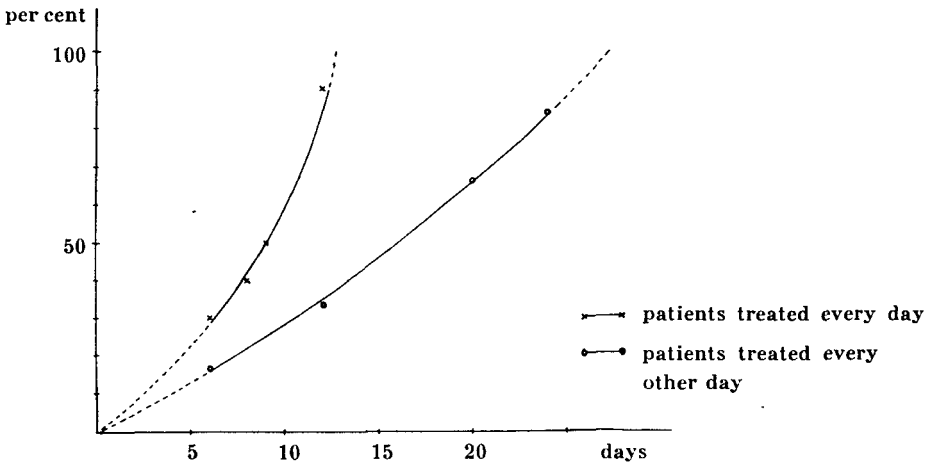

Fig. 1.

The patients who get u.s.-treatment every day were recovered or cured about twice as quickly as the patients treated every other day.

A total of 139 sessions was given—i.e., 9 sessions per patient. A minimum of 3 and a maximum of 12 sessions were given.

The distribution of patients treated every day and every other day is seen in Table 1.

Fig. 1 shows that more rapid effect, improvement and recovery are obtained by daily treatment than by treatment every other day.

The 2 patients whose condition is unchanged have received 8 and 12 sessions.

SIDE EFFECTS

Objective damage of skin, muscles, tendons, joints, and bones was not observed in any of the patients.

The patients indicated no subjective side effects of any kind.

CONCLUSION

Having treated some patients daily and some every other day, we think we have obtained a certain control over the effectiveness of the u.s. treatment. The patients of the two groups were picked out at random.

Our investigations show (Fig. 1) that the patients recovered or were cured about twice as quickly by daily treatment as by treatment every other day.

No other therapy was used concomitant with u.s. treatment.

This seems to prove that u.s. treatment of epicondylitis is an effective and painless treatment with no side effects.

SUMMARY

16 patients with epicondylitis humeri were treated with u.s. Of these, 14 patients got better or were cured after 9 sessions on an average. Patients treated daily recover nearly twice as quickly as patients treated every other day. This seems to prove the effectiveness of u.s. treatment.

RESUME

16 malades avec épicondylite humérale ont été traités par ultra-sons. L'état de 14 ces malades s'est trouvé amélioré ou guéri après une moyenne de 9 séances. Les malades traités chaque jour se guérissent deux fois plus rapidement que les malades traités tous les deux jours. Cela semble prouver l'efficacité du traitement par ultra-sons.

ZUSAMMENFASSUNG

16 Patienten mit Epicondylitis humeri wurden mit u.s. behandelt. Von diesen wiesen 14 Patienten eine Besserung oder Heilung nach durchschnittlich 9 Behandlungen auf. Patienten, die täglich behandelt wurden, waren beinahe doppelt so rasch wiederhergestellt als Patienten, die nur jeden zweiten Tag behandelt wurden. Dieser Umstand scheint die Wirksamkeit der u.s. – Behandlung zu beweisen.

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