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4% ALCOHOL SCLEROSING INJECTIONS FOR TREATMENT OF NEUROMAS

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Premise:

Intermetatarsal neuromas should respond to sclerosing therapy in a similar fashion as other nerve related conditions. Local infiltration of anesthetic and cortisone has empirically been known to reduce neuroma and neuroma-like symptoms in the feet. The basis of this evaluation was the theory that the nerve tissue proximal to a neuroma could be destroyed (sclerosed) using a 4% alcohol based solution, thereby correction all symptoms associated with the neuroma. The end result should be much the same as with the surgical excision of the neuroma without secondary scarring.

Materials:

The 4% alcohol sclerosing solution is made with 2 cc absolute (dehydrated) alcohol solution mixed with 48 cc 0.5% bupivacaine with epinephrine 1:200,000. The label of this local anesthetic is then covered with a new label indicating that it is now sclerosing injection.

Methods:

For the purposes of this study, only those patients presenting with an intermetatarsal space neuroma (that has never been treated conservatively or surgically) were included. Other studies of the use of 4% alcohol injections have included patients with 'stump' neuromas or neuromas that have been previously treated with cortisone injections. These patients were compared for overall response and end-results.

Technique:

Each patient was told that they would have a minimum of three injections or a maximum of seven injections into each intermetatarsal space neuroma. If there was no improvement noted after 3 injections the injections were stopped. If, on the other hand, there were improvements noted after 3 injections the technique would be continued for a total of 7 injections. Each injection consisted of ½ cc of sclerosing solution.

Each injection needle (27g, 1 ¼ in.) was placed approximately ¼ to ½ inch proximal to the bulb of the intermetatarsal neuroma. The needle was then carefully manipulated until the nerve was touched and the patient responded. At that point, the injection of ½ cc of the sclerosing solution was preformed. No other adjunctive treatment (such as orthotics, padding, strapping, U.S. etc.) was preformed.

The visits were scheduled from 5-10 days apart. If the patient or the doctor could not complete this program doe

7 visits it was then rescheduled. On each visit the patient was asked to rate their percentage of improvement and the information was noted.

Results:

Fifty patients were reviewed who underwent the 4% alcohol sclerosing injection treatment program for intermetatarsal space neuromas from 1986 to 1992. The following results were generated:

Forty-six patients (92%) showed improvement following the treatment program and there were four reports of failure. Of these there were 2 complete failures (no changes noted), 1 patient reported increased symptoms and 1 patient had improvement but ended up with a reported total relief of all symptoms at completion of the program and had no recurrences after one year. Seven patients were improved at less than 100%.

Complications:

There were very few complications noted by the patients during this study. Seven patients had intense pain post-injection from 24-72 hours in duration. One patient had an over-all increase in symptoms and never improved and he underwent surgical neurectomy. Four patients had increased pigmentary changes at the injection site which was essentially non-symptomatic.

References:

1. Dockery GL: Podiatric Dermatologic Therapeutics, in McCarthy DJ and Montgomery RM (eds): Podiatric Dermatology, Williams & Wilkins, Baltimore, 1986, pp. 311-335.
2. Dockery GL, Nilson RZ: Intralesional Injections, Clin Pod Med Surg., W.B. Saunders, 3:473-486, 1986.

Absolute or Dehydrated alcohol is supplied by Abbot Pharmaceutical and by American Regent Laboratories, Inc. Shirley NY and are supplied in 1 mL ampules which may be ordered by your local pharmacist.