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Air Rotor and Clinical Micromotor Induced Sensory Loss

TO THE EDITOR:

An air rotor and a clinical micromotor are invaluable tools in the practice of dentistry. A 32-year-old dental surgeon who had been using these two instruments for the past 6 years presented with numbness over the dorsal aspect of the first web space and adjoining area of the right hand of 6 months' duration. A sensory examination revealed the absence of fine touch, diminished pain, and intact perception of temperature over the area (Fig. 1). There was no wasting of muscles. Peripheral nerves, namely the radial, ulnar, median and cutaneous branch

of the radial nerve, did not show features suggestive of neuritis.

Low frequency-high amplitude vibrations are known to sensitize digital vessels in susceptible persons, although the reason for susceptibility remains unknown (¹). Occlusive arterial disease may follow vasospasm following repeated trauma to the palmar and digital arches (¹). Individuals prone to suffer include stone cutters, chain saw users, riveters, pianists, and typists (²). A vibration injury may lead to nerve damage, producing sensory loss and weakness of muscles of the hand (¹). The authors feel

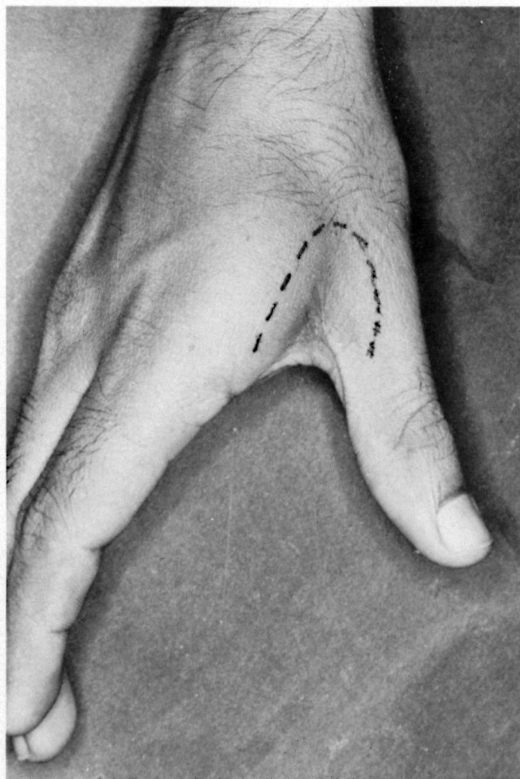


FIG. 1. Area showing sensory loss.



FIG. 2. Air rotor in contact with hypoesthetic skin.

that an air rotor and a clinical micromotor (Fig. 2) with 500 to 300,000 revolutions per minute may either directly involve the sensory nerves or may act indirectly by inducing occlusive vascular disease of vasa nervosum which supply the sensory nerves, eventually resulting in sensory loss over the area of the skin it comes in contact with.

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Method for Detecting Sulfones in Urine

TO THE EDITOR:

Resistance of *Mycobacterium leprae* to the first line drugs used in the treatment of Hansen's disease is well known. Dapsone resistance is particularly common, rifampin resistance less common, and clofazimine resistance rare. Drug resistance in *M. leprae* is thought to be favored by prolonged low-dose or intermittent therapy^(2,3).

Many of our patients under apparently regular treatment with dapsone show reactive episodes or bacterial relapses for no detectable reason. Because these patients could be harboring bacilli which are sulfone resistant, we have determined the presence of sulfones in urine to rule out one of the causes of bacterial relapse, noncompliance.

The method we have used is a simple and practical one devised by Inalio de Castro in Brazil⁽¹⁾. The method is as follows:

The following four solutions are prepared:

1. Hydrochloric acid 2 N in 75% ethanol.
2. Sodium nitrite 1.5 g in 100 ml of 75% ethanol.
3. Ammonium sulfamate 7.5 g in 100 ml of 75% ethanol.
4. N-(1-naphthyl)ethylenediamine-2HCl 0.5 g in 100 ml of 75% ethanol.

To 2 ml of fresh urine in a test tube, 4 drops of solution no. 1 followed by shaking, 4 drops of solution no. 2 followed by shaking, 4 drops of solution no. 3 followed by strong shaking until bubbles appear, and 4 drops of solution 4 followed by shaking should result in a violet color in the presence of dapsone in the urine⁽¹⁾.

One hundred Hansen's disease patients being treated with dapsone on an ambulatory basis were tested. Of these, 74 were positive for dapsone in the urine, 13 were negative, and 13 were doubtful. In those cases in which the result was positive, the