

SUGGESTED NEW METHODS OF TESTING THERMAL SENSATION DURING FIELD WORK

Sir,

It is well accepted that loss or impairment of thermal sensation is one of the earliest signs suggestive of leprosy. The World Health Organization is currently evaluating battery operated devices for testing thermal sensation in the field areas. But for most of the developing world, where the disease continues to be a public health problem, such devices would have to be imported and the dry cell batteries would have to be supplied regularly (a recurring expenditure) to the paramedical staff.

During house-to-house visits as part of antileprosy vaccine trials, we have tried the following methods to test thermal sensation (apart from conventional scientifically accepted methods):

- 1 Carefully focusing light from the morning sun with a magnifying glass on the suspected patch (or area) for a few seconds and comparing with normal surrounding skin. Since the morning sunlight is not strong (till about 0830 hours in summer and 0930 hours in winter in India), there is no fear of burning the skin. Adults and older children are able to say that they feel a 'warm' sensation. Children under 6 years demonstrate a withdrawal reflex, the absence of which may suggest sensory impairment.
- 2 Using small ice cubes from vaccine carriers; the ice cube is applied gently on the suspected part and compared with normal skin. Patients describe the difference in 'coldness' that they feel.
- 3 Applying a cotton swab soaked in ether/spirit/acetone/alcohol on the suspected part and comparing the 'coldness' felt by the subject with normal surrounding skin.

All the above-mentioned methods have been compared with the standard thermal testing technique using hot and cold test tubes.¹ In our field areas, hot water can be obtained at almost every house in the morning. Cold water is obtained from melted ice in the vaccine carriers in summer and ordinary water is used during winter. Our studies show reasonably consistent results. The main advantage of these suggested methods is that there is no need for imported instruments, the necessary items being locally available in the developing world.

However we feel that these suggested methods need to be scientifically evaluated.

*ICRC Anti-leprosy Vaccine Project
165 Railway Lines
Solapur-413 001, India*

S KARTIKEYAN,
R M CHATURVEDI
S V NARKAR

Reference

¹ Thangaraj RH. *A Manual of Leprosy*, 5th edition, 1987.