

RESEARCH NOTE

A Scarifier for Obtaining Specimens for Diagnosis of Leishmaniasis and Other Skin Infections

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During the course of our work on leishmaniasis in the Amazon Region, we have felt the need for a practical instrument for collecting and manipulating lymph samples from skin and mucosal lesions in human subjects. Existing methods for obtaining biopsy material or exudates include the use of scalpel blades, disposable stylets, wooden toothpicks, dermatological punches and aspiration with or without saline (Ministério da Saúde 1993 *Guia de Controle da Leishmaniose Tegumentar Americana*, L Hendricks & N Wright 1979 *Am J Trop Med Hyg* 28: 962-964, MCA Marzochi et al. 1993 *Rev Inst Med Trop S Paulo* 35: 301-303). Preparation of biopsies for culture or inoculation in hamsters also usually involves the use of local anaesthetic, forceps and scissors. Disposable instruments may be locally unavailable, or become costly if used routinely, and handling with multiple instruments increases the risk of contamination. In our experience, material for culture is best collected by simple means without anaesthetic and in cutaneous leishmaniasis biopsies are necessary only for histopathological studies. We have developed a practical and economical instrument (Fig. 1) for the collection (Fig. 2) of exudate from skin and accessible mucosal lesions, which allows the specimen to be manipulated directly for seeding into culture media (Fig. 3) or the preparation of smears for microscopy (Fig. 4). Material collected with this instrument may also be macerated and

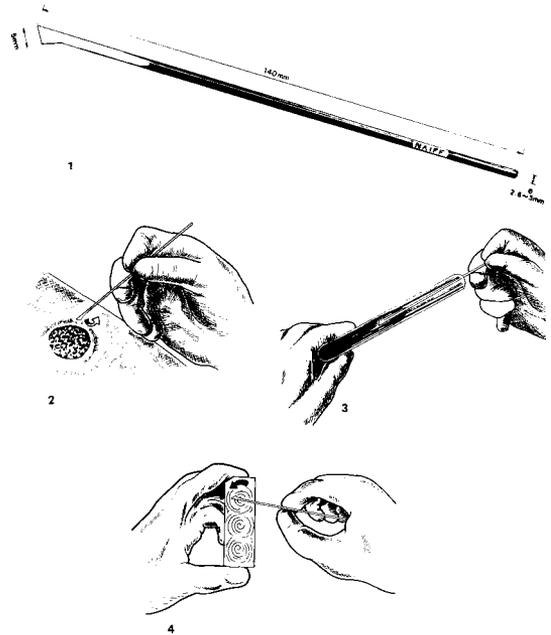


Fig. 1: Naiff's Scarifier. Collection and manipulation of exudate. Fig. 2: collection of material from skin lesion. Fig. 3 seeding culture medium. Fig. 4: preparation of smears (centrifugal spiral action).

suspended in physiological saline for inoculation into hamsters.

The scarifier (Escarificador de Naiff, INPI Patent MU 7201236-6) is made from a stainless steel rod 2,6-3 mm in diameter and 140 mm in length. One end of the rod is worked into a trapezoidal blade 5 mm wide, one side of which forms a cutting edge. If other suitable rods are unavailable, we have found that satisfactory instruments can be prepared from the steel spokes of bicycle wheels. The device is reusable after periodic re-sharpening and proper sterilization, and we have found it to be practical and efficient under both field and laboratory conditions. The cost (labour and material) of one Naiff's instrument is US\$ 1.00 each and of one disposable blade is US\$ 0.35. Considering the maximum usage time of each of them, it is obvious that the Naiff's instrument is much more cost-effective than a scalpel blade, as the former can be used for more than 12 months, whereas the latter cannot be, even if sterilized by a flame, re-used for more than 3 times. Although designed for studies of leishmaniasis, the instrument can also be used for obtaining samples of mycobacteria from skin lesions or fungi from between the toes or around the nails.

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