

A preliminary report on the examination of skin snip method used in the detection of *Onchocerca volvulus* microfilariae.

Isao TADA

Dept. of Med. Zoology, Kanazawa Medical University, Ishikawa, Japan

Isao IWAMOTO

*Dept. of Parasit. & Dept. of Internal Med., Institute for Trop. Med.,
Nagasaki University, Nagasaki, Japan*

Teferra WONDE

*Dept. of Med. Zoology, Imperial Central Laboratory & Research Institute,
Addis Ababa, Ethiopia*

Research note

Although skin snip method has been widely used for the diagnosis of human onchocerciasis, there are quite few reports on the quantitative examination of this method. In 1971, the authors engaged in the study of onchocerciasis in South-west Ethiopia, and tried to examine the method itself. In order to test the teasing process which has been ordinarily used by previous researchers, 3 snips were taken from the buttock of each of 6 infected persons. Each snip was collected approximately 1 cm apart from the other two snips to avoid unevenness of microfilaria density (MFD). Snip P was teased into small pieces by commonly used procedure described by Duke (1962) using 2 needles, while snip M, roughly into 2 pieces, and snip G, not torn. A total of 18 skin snips were incubated in physiological saline maximally for 22 hours at room temperature (17.5°–21.5°C). As shown in Table 1, the highest MFD was always seen in either non-teased snips or in snips which were simply torn into 2 pieces. From this result, it could be concluded that the teasing process would hinder the correct MFD probably because of mechanical damages on microfilariae in the skin. That the torn fragments of microfilariae were often seen in saline after ordinary teasing will support this speculation. The authors would like to propose the quantitative skin snip technique by using non-teased snips in the experimental studies of human onchocerciasis.

Table 1. The effect of teasing the skin snip on MFD.

	Snip type	M F D*		
		G	M	P
Case No. 1		16.6	<u>27.3</u>	17.4
2		<u>11.8</u>	10.7	6.4
3		<u>21.2</u>	11.7	9.1
4		4.0	<u>4.5</u>	1.6
5		<u>111.9</u>	84.7	89.6
6		<u>46.1</u>	23.7	10.8

* MFD ; Number of microfilariae per 1 mm² skin, the highest MFD among 3 from the same individual was underlined.

Onchocerca volvulus マイクロフィラリアの皮膚切片からの 遊離に関する研究 (予報)

多 田 功

金沢医科大学動物学教室 (主任: 多田 功 教授)

岩 本 功*

長崎大学熱帯医学研究所寄生虫学部門 (主任: 片峰 大助 教授)

テフェラ・ウオンデ

エチオピア帝国中央衛生研究所医動物学部門 (主任: テフェラ・ウオンデ)

ヒトのオンコセルカ症の診断には skin snip 法が広く用いられているが、著者らの経験では従来の方法は必ずしも定量的でないことが明らかとなった。エチオピア国イルバボール州に於いてマイクロフィラリア (mf) 保有者を用い skin snip からの mf 遊離を観察した。患者の臀部より約 1 cm づつ離れた 3 つの切片を採取し、細切しない snip を snip G, 2 分したもの snip M, 細切したものを snip P とし、スライドグラス上の生食水中で室温 (17.5°-21.5°C) にて incubate し一定時間毎に次のスライドグラスに

移し変えることをくりかえし、遊出した mf 数をかぞえて集計した結果、細切しない snip での mf 密度 (MFD) が最も高く、かつ長時間にわたり mf が遊出し続けた。細切したものでは短時間内に大部分の mf が遊出完了するが MFD は低い。細切することにより mf が切断、圧迫され活力を失うものと考えられる。著者らは全く細切しない snip を用いることが実験的な研究のための定量法として最適であると考ええる。

* 現住所: 長崎大学熱帯医学研究所診療科 (内科) (科長: 村上文也助教授)