

A-16 Laboratory surveillance of poliomyelitis (acute flaccid paralysis - AFP) cases in 1995

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Acute flaccid paralysis (AFP) is a presenting feature of poliomyelitis, but not all AFP cases are due to polio. As diseases like 'Guillain-Barre' and transverse myelitis closely resemble poliomyelitis, all AFP cases must be investigated virologically. The focus here, is on the isolation, identification and characterization of polioviruses. This study analyses the 1995 data with a view to highlighting the shortcomings and to take corrective measures before certification procedures commence in preparation for polio eradication.

Stool samples from AFP cases and their contacts were processed and inoculated on to pre-grown Hep-2 and RD cells, incubated at 37°C and examined for cytopathic effect, daily for 7 days. Negatives were re-passed and examined for a further period of 7 days. Positive cultures were identified in a neutralization test using standard antisera provided by the WHO. Polio isolates were characterized as wild or vaccine-like, by an ELISA and a RNA probe hybridization method. Date of onset of paralysis, dates of collection, dispatch and receipt of samples and the condition of samples (quantity, leakage, presence of ice) were recorded.

Of 94 AFP cases notified, only 77 (85%) had been investigated virologically. Of these only 34 (44%) had 2 samples collected 24-48h apart and within 14 days of onset of paralysis. Of 168 stool samples received from AFP cases, 3 vaccine-like, type 2 polioviruses and 18(10.7%) non-polio enteroviruses were isolated.

Out of 430 contact samples, 11 vaccine-like polioviruses and 49 (11.4%) non-polio enteroviruses were isolated. Wild polioviruses were not isolated either from the cases or from the contacts. From a total of 598 stool samples, 50 did

not reach the laboratory within 72h of collection and 20 were in poor condition. 530 (97%) reports were sent out within 28 days.

AFP is a notifiable disease in Sri Lanka. As polio is to be eradicated by the year 2000, it is important that all AFP cases are investigated virologically. Two stool samples should be collected 24-48 h apart and within 14 days of paralysis. Although no wild polioviruses have been isolated, the above criteria have been met only in 44% of cases and this needs improvement. The condition of samples received has been good as evidenced by the non-polio isolation rate of more than 10%.

All AFP cases notified in 1995 have been reviewed by the National polio review committee. No cases were confirmed as polio.