A-47: Restriction fragment length polymorphism analysis of *Mycobacterium tuberculosis* strains, isolated from Sri Lankan patients: a preliminary study

D N Magana Arachchi, S Gamage, N V Chandrasekharan, E H Karunanayake, J Perera

(Depts of Microbiology & Biochemistry, Faculty of Medicine, University of Colombo, Colombo 8)

Restriction fragment length polymorphism (RFLP) analysis has become a very important tool in the epidemiological studies on tuberculosis (TB), such as outbreak investigations, transmission in the community and the dissemination of multidrug-resistant clones. Among the various genetic elements, the insertion sequence IS 6110 is the most frequently used genetic marker for strain differentiation of *Mycobacterium tuberculosis*.

The objective of this study was to determine the DNA fingerprint patterns of *M. tuberculosis* isolates obtained from TB patients in Sri Lanka.

Mycobacterium tuberculosis strains were grown on L-J slopes for 3 weeks at 37°C. DNA was extracted using standard methods. Genomic DNA from each isolate was completely digested with *Pvu II* and the resulting fragments were size fractionated on an 0.8% agarose gel and Southern blotted onto nitrocellulose. The probe for hybridization was prepared by PCR, amplifying a part (541bp) of the insertion element IS 6110. Labelling of the probe was carried out using an enhanced chemiluminescence detection kit and hybridization signals were imaged onto X-ray films. In this preliminary study 16 isolates were analysed.

Based on Southern blot analysis the insertion element IS 6110 appears to be present in 1-5 copies in the genome of the various isolates. A high degree of polymorphism of IS 6110 containing fragments was observed in the different isolates.

These results confirm that DNA fingerprinting using IS 6110 may be a useful tool for studying the epidemiology of tuberculosis.

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