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Provocative poliomyelitis causing postpolio residual paralysis among select communities of two remote villages of north karnataka in India: A community survey

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Intramuscular injections can provoke muscular paralysis especially, if the child has had exposure to polio virus.

The purpose of the study was to determine the association with known risk factors for motor disabilities in two remote villages of North Karnataka (India), where an increased number of disabled people among select communities had been reported.

A community based survey was conducted. The selection of study subjects was done through screening, history related with occurrence of musculoskeletal disability, screening and general examination of the affected joints and muscles.

Data analysis was done by estimation of percentages.

Among the physical disabilities identified, the most common was post-polio residual paralysis. 35.65% (n = 41) subjects had developed paralysis following the administration of an intramuscular injection when they had acute viremia in childhood, indicating that (probably) muscle paralysis would have been provoked by intramuscular injections, resulting in provocative poliomyelitis.

Unnecessary injection must be avoided in children during acute viremia state and use of oral polio vaccine should be encouraged.

Key words: Community survey, Post-polio residual paralysis, Provocative poliomyelitis.

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Strategy of stable vaccine formulation development

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The goal of vaccine formulation research is to develop safe, efficacious, stable, and scalable dosage forms of vaccine products for commercial use. The challenges for achieving this goal include the physicochemical complexity and intrinsic lability of biological macromolecules and the need for adjuvants and delivery systems, as well as combination of antigens, necessary to improve efficacy, reduce the number of injections, and increase vaccination rates. This session discusses protein and peptide-based parenteral vaccine formulation development strategies at different stages. Some of the topics to be discussed in this presentation include:

- Vaccine formulation development timeline and cycles
- Characterization of antigen, adjuvants and delivery systems intrinsic properties and compatibility
- Formulation approaches to enhance vaccine dosage form stability, potency, and delivery
- Value of early involvement of vaccine formulation research

Stability studies at various stages of vaccine product development

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