

REFERENCES

1. Jacob John T, Thacker N, Deshpande JM. Setback in polio eradication in India in 2002: Reasons and Remedies. *Indian Pediatr* 2003; 40: 195-203.
2. Paul Y. Accuracy of the National Polio Surveillance Project Data in Rajasthan. *Indian J Pediatr* 2002; 69: 667-673.
3. Ahuja B, Gupta VK, Tyagi A. Paralytic poliomyelitis (1989-1994): Report from a Sentinel Center. *Indian Pediatr* 1996; 33: 739-745.

Reply

We are happy to respond to Dr. Yash Paul's letter commenting on our paper on the reasons for the setback in polio eradication and remedies needed for setting right the defects in our national efforts. First of all he seeks clarification on our statement that "the increase in cases in 2002 is due to inadequate performance of immunization efforts". However, he does not state explicitly what clarification is sought, nor does he state why he doubts that inadequate immunization was contributory to the outbreak of polio. It is common knowledge that a successful immunization program averts outbreaks.

Dr. Paul states that immunity provided by wild polioviruses circulating in the community contributes to a reduction of incidence of polio. This is only partly true since circulating polioviruses are the cause of polio in the community. However, soon after an outbreak of polio the incidence will decline on account of the decrease in the size of the pool of susceptible children. This is only a temporary phenomenon as the pool of susceptible children enlarges continuously with new births in the community. Thus, overall, circulating wild viruses do not reduce incidence. To put it another way, in India,

prior to the introduction of immunization virtually 100% of population were getting immune with wild virus infections by the age of 5-10 years. Yet, the incidence of polio was uncontrolled.

He also believes that improvement in hygiene and sanitation leads to less exposure to infection, leading to a decline in the incidence of polio. This is a common error; in fact the incidence rose in industrialized countries with increasing levels of hygiene and sanitation. This paradox is well known in Public Health circles.

Dr. Paul uses his letter as a medium to complain about misclassification of cases of acute flaccid paralysis (AFP) in Rajasthan. We wish to highlight that the modern classification of polio is based on virology. Only AFP with wild poliovirus in stool is classified as polio due to wild virus. In a child with AFP and appropriate stool specimens, the absence of wild viruses is accepted as evidence against the diagnosis of wild virus polio. Indeed it is not AFP that is under eradication, but wild polioviruses.

Thus the criterion of eradication is the absence of wild polioviruses in stools of children with AFP for three consecutive years. Obviously clinical and virological surveillance has to be of the highest possible quality in order to provide confidence in the criterion of eradication. We wish to point out that this issue did not emerge from our paper, but was inserted by Dr. Paul. Our recommendation is that any complaints about misclassification should be taken up with the local surveillance medical officer and with the national polio surveillance project officers.

Dr. Paul does not seem to have understood the issues relating to vaccine failure. The phenomenon of vaccine failure with OPV was detected in India and investigated in depth,

from about 1968. The very reasons for multiple doses of OPV and the need for pulse immunization are the occurrence of vaccine failure of three doses of OPV. Dr Paul is not on firm grounds when he declares that polio cannot be eradicated without first discovering the reason(s) for vaccine failure. Vaccine failure can be overcome by increasing the number of doses and also by pulse immunization.

Dr. Paul faults us for not addressing the

issue of vaccine virus associated paralytic polio (VAPP) in our paper on the setback in eradication of polio due to wild viruses. The setback was not due to increased occurrence of VAPP and our paper was focused on the issues limited to those in the title of our paper.

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Mystery Behind Mysterious Disease: Far from Unraveled !

Kudos to Indian Pediatrics for bringing upfront the issue of emergence of hitherto unknown childhood encephalopathic illnesses from different parts of the country in recent times by publishing a spate of articles in the journal(1-4). The proactive approach adopted by the journal is quite exemplary and is indeed an example of receptive and responsive piece of medical journalism. However, there are certain issues that need to be considered in some details.

Though Dr Jacob John in his viewpoint(2) did try quite earnestly to unravel the mystery of these so called 'mysterious diseases', but even he could not go beyond ascertaining a tag of 'Reye syndrome' (RS), which in itself is quite a non-specific entity to these epidemics. Hence, the exact etiology of the illness is still obscure.

Dr Jacob John is quite right in identifying RS as the major illness masquerading as 'killer brain disease' but the fact remains that RS is no longer a distinct clinico-pathologic entity but a descriptive term covering a group of heterogeneous disorders of infectious, metabolic, or toxic etiology(5). 'Classic' Reye syndrome is a term used by most western experts to define a strong association between giving aspirin to children with viral illness and development of encephalopathy. However, few researchers have even started questioning its existence- if it was ever really existed?(6). A more appropriate term would be 'Reye-like encephalopathy' till an exact etiology of the disease is established. Even more desirable would be to coin an altogether a different name for this deadly disease as suggested by Dr Jacob John himself(2).

In his other write-up(4), Dr Jacob John has questioned the etiopathologic role of measles virus in the genesis of RS as claimed by NIV, Pune team(7). Though isolation of measles virus from CSF should provide an