

## *Incidence and clinical profile of pneumonia in children before and after the introduction of PCV-10 vaccination in Bhaktapur, Nepal*

Dhruba Shrestha

Siddhi Memorial Women and Children Hospital, Nepal

### *Abstract*

**S**treptococcus pneumoniae is considered as the leading cause of Pneumonia, Meningitis, Otitis media, Sinusitis and Septicaemia. WHO also estimates that 1 in every 20 children below 5 years of age will have an episode of pneumonia each year. S pneumoniae is the most important cause of pneumonia in young children. Pneumococcal Conjugate Vaccine (PCV) have shown efficacy against several serotypes of S. pneumoniae and it is now part of routine immunization schedule in many countries, including Nepal. PCV-10 was first introduced in Nepal on 18th January 2015 and is now included in National Immunization Schedule at 6 weeks, 10 week and 9 month of age.

This was a retrospective study conducted in the pediatric unit of Siddhi Memorial Women and Children's Hospital. Data was reviewed from January 2014 to December 2018. There were altogether 601 children admitted due to pneumonia in the study period after exclusion 593 cases were eligible for analysis. 63% had diffuse involvement of lung in X-ray. PCV 10 was introduced in our hospital in October 2015 and there is significant decrease in the admission due to pneumonia after its introduction.

Most commonly used antibiotics were Crystalline Penicillin and Cefotaxime for treatment and both were equally efficacious. Failure rates were 8% and 1% respectively. To conclude, PCV is a very effective vaccine for S. pneumoniae. There has been dramatic decrease in the incidence of pneumonia since its introduction. Penicillin is still an effective drug for treatment of pneumonia.



### *Biography:*

Dhruba Shrestha has completed his MBBS from BP Koirala Institute of Health Sciences, Nepal and MD in Pediatrics from National Academy of Medical Sciences, Nepal. His special interest is in pediatric nutrition and non-invasive cardiology. He has done his special Postgraduate Diploma in Pediatric Nutrition from Boston University, USA. He has many publications in international and national journals. He is also an Executive Committee Member of Nepal Pediatric Society (NEPAS).

### *Speaker Publications:*

1. "Correction: High blood levels of lead in children aged 6-36 months in Kathmandu Valley, Nepal: A cross-sectional study of associated factors"; PLoS ONE 12(9): e0185773.
2. "Predicting deaths in a resource-limited neonatal intensive care unit in Nepal"; Trans R Soc Trop Med Hyg 2017 07;111(7):287-293
3. "Prevalence of vitamin D deficiency in pregnant women and their babies in Bhaktapur, Nepal"; BMC Nutr 2019 29;5:31. Epub 2019 May 29.
4. "Changes in nutritional status of children who lived in temporary shelters in Bhaktapur municipality after the 2015 Nepal earthquake"; Trop Med Health 2020 28;48:53. Epub 2020 Jun 28.
5. "Multidrug-resistant and extended-spectrum beta-lactamase-producing uropathogens in children in Bhaktapur, Nepal"; Trop Med Health 2020 3;48:65. Epub 2020 Aug 3

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