VACCINOLOGY II

PNEUMOCOCCAL VACCINES - PAST, PRESENT AND FUTURE

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Abstract: *Streptococcus pneumoniae is a major cause of mortality and morbidity among children under five years of age. India is one among the countries with high mortality due to invasive pneumococcal disease. With the emerging resistance of pneumococcus to penicillin, especially in meningeal isolates, the focus is on prevention, which is mainly by pneumococcal vaccines. Since the current vaccines are serotype specific, it protects against invasive pneumococcal disease and is affected by geographic diversity of the serotypes, use of other targets such as pneumococcal surface protein A is explored. This commentary gives an overview of the pneumococcal vaccines that are in use and that are under development.*

Keywords: *Streptococcus pneumoniae, PCV, PPV, India.*

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Points to Remember

- ***WHO recommends conjugate (PCV10 or PCV13) for routine immunization as three doses (2p+1 or 3p+0) and polysaccharide (PPSV) vaccines for adult immunization.***
- ***PPSV vaccines generate a T- cell independent immune response without memory B- cells, whereas conjugated vaccines can induce a T-cell- dependent and B cell mediated response.***
- ***The pneumococcal vaccine impact is measured by decrease in endpoints such as mortality, invasive pneumococcal disease, pneumonia, AOM and the nasopharyngeal carriage.***
- ***Surveillance of PCV impact in developing countries using endpoints other than nasopharyngeal carriage is challenging, and the best possible approach in such case would be the nasopharyngeal surveillance.***
- ***Continuous pneumococcal surveillance is important in India, so as to monitor the serotype replacement.***

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