

PREDOMINANCE OF CLONAL COMPLEX 320 AMONG INVASIVE STREPTOCOCCUS PNEUMONIAE SEROTYPE 19F ISOLATES FROM INDIA IN PRE-VACCINE ERA. (ID 1203)

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Abstract

Background

Worldwide *Streptococcus pneumoniae* serotype 19F, often multi-drug resistant, has emerged as an important pathogen associated with invasive pneumococcal disease (IPD). The aim of the study was to characterize invasive serotype 19F isolates collected from India in pre-vaccine era.

Methods

Among 480 pneumococcal isolates collected across India from 2010-2018, 38 belonged to serotype 19F (8%). These were sequenced on Illumina Platform. The sequence data was analysed for serotype, clonal complex, pilus islets and MLST using the CDC pipeline

Results

Overall, 11 STs encompassing in 4 GPSCs and 3 clonal complexes (CCs) were identified. The most prevalent strain of serotype 19F was GPSC1 (n=31, CC320), followed by GPSC10 (n=3, CC10879). CC320 was the major clonal complex (n=33) with ST236 (n=7), ST271 (n=7), ST320 (n=7), ST2697 (n=7), ST2854 (n=2) and ST651, ST1396, ST8359 (n=1 each). A majority of GPSC1 isolates (30/31) had pilus 1 & 2 while GPSC10 isolates were negative for both. All GPSC1 isolates and GPSC10 isolates were resistance to at least three antibiotic classes

Conclusions

This analysis identified CC320 as the major lineage among serotype 19F isolates pre-PCV vaccination in India. Overall, serotype 19F isolates were found to be multi-drug resistant with a high percentage of pili genes present.