Is Streptococcus Pneumoniae a B-Lactamase Producer?

Madam, this is in reference to an article titled "Antibiotic Susceptibility of Streptococcus Pneumoniae in Karachi" published in JPMA Vol. 50, No.2, February 2000. in the Results the authors have reported 100% susceptibility to amoxyci Ilin—clavulanate whereas the same isolates have 80.2% susceptibility to penicillin and the rest 19.8% are having intermediate status. These results suggest that this phenomenon be due to B—lactaniase production by the Streptococcus pneumoniae. which is not the actual mechanism with this organ ism. 'Fhe mechanism of resistance is rather the altered targets or decreased affinity of pen icillins to the penicillin binding proteins. the authors have written this themselves in the Introduction as well as many other workers[1,2]. Moreover, according to NCCLS "A pneumococcal isolate that is susceptible to penicilliti can be considered susceptible to ampicillin amoxycillin. amoxycillin—clavu Innate and all the cephalosporins. Testing of these drugs against penicillin intermediate or penicillin resistant isolates is not recommended because reliable interpretative criteria for these agents with Streptococcus pneumoniae are not available". In view of the above:

1. Festing of Streptococcus pneumoniae againstmoxyci llin-clavulanate is not understood as ampici I in or anioxycillin would have given the same results, which are much cheaper drugs for use against infections caused by this organism.

2. Disparity between the resulls of amoxycillinclavulanate and pen icil l in should not be there as both these drugs bind to the same receptors on Streptococcus pneumoniae and B—lactamase production is not the mechanism of resistance.

I shall be well benefited if the authors comment on the above aspects of the study.

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References

1. Handwerger S. Tomasz A. Alterations in penicillin binding of clinical and laboratory isolates of pathogenic Streptococcus pneumoniac with low levels of penicillin resistance. J.Infect Dis.. 1986.153:83-9.
2. Appelbaum PC. Antimicrobial resistance in Streptococcus pneumoniac an overview Clin.INfect.Dis., 1992.15:77-83.