

PP-025 Amp C beta-lactamases among extended spectrum beta-lactamases producing Enterobacteriaceae

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Introduction/background: Amp C beta lactamases are cephalosporinases which confer resistance to cephamycins, narrow-, expanded- and broad-spectrum cephalosporins, beta-lactam/beta-lactamases inhibitor combination and aztreonam. ESBLs and Amp C beta lactamases may co-exist in isolates. Presence of Amp C beta-lactamases goes undetected in presence of ESBLs. This may lead to treatment failure and poses diagnostic and therapeutic challenge.

Objective: To detect the prevalence of Amp C beta lactamases among ESBL producing Enterobacteriaceae isolated from a tertiary care hospital of Pakistan.

Place and duration of study: The study was carried out from October 2009 to March 2010, at the Department of Microbiology, Army Medical College/National University of Sciences and Technology, Rawalpindi, Pakistan.

Methods: Clinical specimens were received from various wards. Organisms were identified by standard microbiological procedures. ESBL detection was done by double disk approximation method by Jarier et al and confirmed by Etest (ceftazidime, ceftazidime/clavulanic acid). ESBL producing organisms were subjected to three dimensional extract test (3DET) for detection of Amp C beta lactamases. Antimicrobial susceptibility of isolates against aminoglycosides, cephalosporins, monobactams, fluoroquinolones, carbapenems and beta-lactam/beta-lactamase inhibitor combination was tested by using Kirby Bauer disc diffusion technique, according to CLSI guidelines.

Results: We evaluated 58 ESBL producing Enterobacteriaceae for Amp C production (32 *E. coli*, 18 *K. pneumoniae*, 6 *Enterobacter* spp, 2 *K. oxytoca*). 34 were positive for Amp C beta lactamase production. 68% *E. coli*, 32.3% *K. pneumoniae* and 5.8% *Enterobacter* spp are positive for Amp C beta lactamases. Overall prevalence of Amp C in ESBL producing isolates was 58.6%.

Conclusion: This study shows the high prevalence of Amp C beta lactamase producing isolates, which may lead to serious therapeutic problems. Three-dimensional extract test is a reliable method for detection of Amp C beta-lactamases.

PP-026 Cryosurgery for Rhinoscleroma – a clinico-bacteriological study

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Introduction: Scleroma is a chronic granulomatous disease of the nose and upper respiratory tract which is fairly common in Egypt. *Klebsiella rhinoscleromatis* could be isolated from cases of scleroma. The viral theory has been disputed by electron microscopic studies. Up till now, there was no definite line of successful therapy accepted universally. Some suggest X-ray treatment, radium therapy, autogenous vaccine, fever therapy, and surgical removal. Now Cryosurgery has widely extended to deal with benign and malignant lesions nearly all over the body.

Aim: To study the effect of Cryosurgery on the *Klebsiella rhinoscleromatis* (the causative organism) during the early stages of the disease and to study the HLA pattern of these patients.

Subjects and Methods: Twenty patients with Rhinoscleroma. Biopsies were taken from the nasal lesion to confirm Rhinoscleroma then two-minutes double cycle

Cryoapplications were done and biopsies were taken immediately and one week after the Cryoapplications. The specimens were examined bacteriologically. HLA typing using microlymphocytotoxicity method.

Results:

1. 65% of patients needed three Cryoapplications of double cycle, two-minutes for each, at two-week intervals to become free from *Klebsiella rhinoscleromatis* and destroying of the granulomatous mass. Two patients (10%) needed two Cryoapplications and five patients (25%) needed four Cryoapplications.
2. HLA-A₉ was detected in 55% of patients and in 11.56% in control sample. This difference was statistically significant.

Conclusion:

1. Treatment by Cryosurgery indicate eradication of *Klebsiella rhinoscleromatis* and the granulomatous mass.
2. The number of Cryoapplications needed for treatment were proportional to the size and site of the mass.
3. Association of HLA-A₉ with the disease added further support to an immuno-pathological mediated disease mechanism in Rhinoscleroma, i.e., the immune system of the body failed to recognize the *Klebsiella rhinoscleromatis* as a foreign antigen so, no antibodies are formed.

PP-027 Bacteriological studies of Pityriasis alba

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Introduction: Pityriasis alba is one of the most common skin diseases seen in Egypt and in other countries mostly affecting children. Various accused etiologic factors. Climatic, hygienic, nutritional, bacterial, fungal and immunologic factors are blamed.

Aim: To determine the role of bacteria & fungi in Pityriasis alba.

Subjects and Methods: Fifty patients with clinically evident Pityriasis alba and control group of 15 normal individuals.

1. Skin sampling: An area of 1 cm² over the lesion was marked by a sterile metal frame using a sterile scalpel, twenty five upward strokes were done using even pressure. A similar specimen was taken from the control area nearby the lesion & from controls. The scrapings were inoculated in a tube of 1ml. nutrient broth with glass beads and specimens were cultured for bacteria, fungi & for Quantitative estimation. They were counted first as total bacterial counts/1cm² of the skin and then differential counting of the various species of bacteria.
2. Urine and Stools analysis.

Results:

1. The most frequently isolated organism from the lesions was *Staphylococcus epidermidis* in 57.14%.
2. There was higher counts of bacteria in the patches of Pityriasis alba than in the uninvolved skin and skin of normal controls this increase is not statistically significant.
3. The incidence of Parasites among Pityriasis alba cases was 56.00%, while it was 44.00% in the control group. *Ascariasis* was the most prevalent amounting to 46.00% in cases of Pityriasis alba, compared with 30.00% in normal controls.
4. All scraping did not give any fungal growth.

Conclusion: Bacteria may play a role in the etiopathogenesis of Pityriasis alba. It can be assumed that the condition of the skin in Pityriasis alba lesion is more susceptible to bacterial over-growth, this increased susceptibility may