EDITORIAL

NEW ENTITY IN COMMUNITY ACQUIRED LUNG INFECTION

Nazim H. Bokhari
MBBS,BSC,MCPS(Med),MCPS(Chest),MD(Chest),FCCP

Pneumonia is conveniently classified as community acquired pneumonia (CAP) **(1)** and hospital acquired pneumonia (HAP).When signs and symptoms of infection appear 72 hours after hospitalization, it is defined as HAP. Pneumonia acquired during ICU stay or while on mechanical ventilation (VAP) are specific subtypes of HAP **(2)**It is highly significant to stratify all patients presenting in a hospital with pneumonia according to the intended site of care, like OPD, for indoor patients general ward orhigh dependencyunit, and for ICU if assisted ventilation is needed. The classification scheme reflects different causative organisms and likely. susceptibility. to various antibiotics which are to be initiated empirically **(3)**Dramatic changes have occurred recently regarding health care systems in the developing countries due to socioeconomic disturbances. A large number of patients are being provided out of hospital care, which include old people's shelters domiciliary care by private nurses and paramedics, dialysis units, parenteral therapy centers, and nursing homes. All of these patients are exposed to health care system or personnel. A significant number of patients presenting in hospital with CAP may have acquired infection in these health care facilities. **(4)**This is termed as Health Care Associated Pneumonia (HCAP). Such patients require special attention as in spite of being defined as community acquired (CAP) the causative organisms may be different requiring distinct antibiotics. Patients with HCAP are generally old, having often co morbid conditions like CVA or immune compromised status, malnourishment and have been receiving proton pump inhibitors, steroid, broad spectrum antibiotics and aerosol therapy. The reported incidence in western countries varies from 17-70% of hospitalized patients. The etiological agents for HCAP are similar to HAP or VAP **(5).** Staphylococcal infection is more common while pseudomonas and other gram negative infection are relatively less frequent. In one study Strep. pneumoniae, H. influenza and aspiration pneumonia were more common. Among them penicillin and erythromycin resistance was more common. Prior use of antibiotics may be responsible for emergence of drug resistant strains Regular use of vaccine against pnumococcal and influenza infection among resident of such health care facilities may reduce subsequent mortality and hospital stay. As difficulty is swallowing is common while gasrtro-oesophagial reflux is frequently present, aspiration pneumonia is not unexpected. Diagnosis of aspiration pneumonia may not be easy as macroscopic aspiration is infrequently observed, anaerobic cultures are not carried out routinely and specimen collection require invasive procedures. Four groups of patients with HCAP may be recognized, those with Aspiration Pnuemonia, Drug Resistant streptococcal pneumonia, (particularly penicillin and erythromycin), Gram negative infection and Methicillin Resistant Staphlococcal (MRSA) Pneumonia.**(6)**Mortality in HCAP is similar to HAP. Initial empiric antibiotic therapy is likely to be inappropriate **(7)**Al patients after careful evaluation for diagnosis of HCAP may be managed according to international guidelines. Selection of antibiotics may be based on clinical history, risk factors and likely susceptibility or resistance of the causative organism in, that area. For patients without associated risk factors therapy with a respiratory fluoroquinolone (FQ) alone, or a beta lactam , plus a FQ, or a macrolide (for legionella) may be appropriate.

Prof. of Pulmonology, Shaikh Zayed Federal PGMI, Lahore

Patients with cavitating pneumonia with putrid smell and poor gingivall hygiene may be considered for specific anti anaerobic therapy. Among those with risk factors for drug resistant infection and prior use of antibiotics, anti psuedomonal beta lactam may be combined with a quinolone or aminoglycosides having additional antipsuedomonal effect, along with Vancomycin or Linezolid. De escalation may be carried out after encouraging initial response.

In summary HCAP is a new category of respiratory tract infection which occurs before hospital admission among those subjects which has close association with health care givers. A significant number of patients presenting in a A&E departments in acute condition may have HCAP. Compared with CAP patients with HCAP are older, have more comorbidities, have more often swallowing problems and thus aspirations, are more likely to have received antibiotics and are prone to drug resistant infection. Patients with HCAP are likely to receive inappropriate initial therapy resulting in high morbidity and mortality. It is highly important for physicians to differentiate HCAP from CAP during initial clinical evaluation in the emergency department. Institution based studies are needed among HCAP to find out the likely pathogens and their susceptibility in different geographical areas of the country.

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