

Infectious mononucleosis (IM)

Infectious mononucleosis is caused by Epstein –Barr virus (EBV) a gamma herpes virus and it is called Glandular fever . It transmitted to human through contaminated saliva either by airdroplets or contaminated saliva to hands ,diet ,instruments ...etc . Usually it infect people at childhood or early adulthood .

Clinical features

The patient complains of fever which may be protracted fever and may inter in differential diagnosis of pyrexia of unknown origin ,with acute pharyngitis ,palatal petichial haemorrhage , posterior cervical lymphadenopathy ,splenomegally which is mildly enlarge and tender these patients must avoided to be admitted to hospital because recurrent examination of the spleen may lead to rupture spleen , clinical and or biochemical hepatitis ,these patients if they receive penicillin drug or its derivatives it may induce cutaneous rash . Some cases may presented as subclinical condition or presented or develop complications as sever pharyngeal edema ,chronic fatigue syndrome ,haematological complications like hemolytic anemia ,thrombocytopenia ,cardiac complications like carditis and pericarditis ,neurological complications like transverse myelitis or meningoencephalitis .

Investigations

The diagnosis done by peripheral lymphocyte study in the blood showed 20% atypical lymphocytosis (atypical morphology) .Heterophil antibody is formed this antibody agglutinate sheep and horse RBCs detected by Paul- Bunnell test (by titration) or through slide test (called Monospot test) ,10% of patients not develop Heterophil antibodies so Paul –Bunnell test and Monospot test are negative .

Specific EBV serology by immunofluorescence test like

- 1- Antiviral capsid antibody IgM class (VCA) .
- 2- Antibody to EBV early antigen (EA).
- 3- Antibody to EBV nuclear antigen (anti-EBNA).

Management

The treatment is symptomatic ,aspirin gargle to reduce pharyngeal pain ,if sever swelling of pharynx short course of prednisolon tablets 30 mg for 5 days is used . If the patient has secondary bacterial infection must avoid amoxicillin and similar synthetic drug to avoid maculopapular rash . When the patient improved can return to work but they should care till improvement of the spleen to avoid spleen rupture .

Prognosis : Outcome of the disease is benign course with good improvement but 10% relapse .

Cytomegalovirus CMV

It is a beta herpes virus ,transmitted to human through saliva and its contaminated materials and also through urine ,blood ,semen so it is sexually transmitted disease .

Clinical features

Most cases are subclinical ,or it may presented as influenza like symptoms but longer period of fever , or infectious mononucleosis like symptoms (10-50% of heterophil negative IM) but less presented as pharyngitis ,tonsillitis and less lymphadenopathy but more prominent hepatosplenomegally .

Gestational CMV is usually subclinical but it cause fetal CNS complications .

Investigations and management

Atypical lymphocytosis , heterophil antibody is negative .Anti-CMV antibody IgM indicate acute infection . The disease in immunocompetent patient is self limiting disease no need for treatment and should avoid amoxicillin and its derivatives for secondary bacterial infection because it cause skin rash .

Influenza

There are two strains of influenza virus type 1 and milder form type 2 . In the structure of the virus is having glycoproteins in the surface of the virus called Haemagglutinin and neuraminidase glycoproteins at which changes in the genetic consequences lead to gene shift and appearance of new antigen and new influenza strain viruses like H1N1 ,H3N2etc ,these new strains are highly infectious to communities (pandemic) due to non immunized people and sever presentation .It seasonal out break usually in winter .

Incubation period : 1-3 days .

Mode of transmission : It is systemic disease primarily infect the respiratory system so it is transmitted by air droplets through coughing ,sneezing and hand contamination .

Clinical features : The patient complains of acute fever which is usually high fever associated with headache ,athralgia ,myalgia acute pharyngitis ,it may infect lung lead to viral pneumonia and secondary bacterial infection like staphylococcal or pneumococcal infection or less likely other infections .

The patients usually improved after 5 days if didn't develop secondary bacterial infection or complications like encephalitis ,transverse myelitis ,myocarditis ,pericarditis or myositis . The disease is more sever and has risk of life in elderly patients ,pregnant women and in high co-morbid patients .

Diagnosis : Usually diagnosed clinically in difficult cases the investigations is needed for nasopharyngeal swab for viral RNA or viral antigen by PCR . Serology by anti-influenza antibody usually it became positive after cure of the patients so diagnosed retrospectively .

Management : Antiviral anti- influenza new drugs now is neuraminidase inhibitor ,Oseltamivir 75 mg twice daily or inhaled Zanamivir 10 mg twice daily both usually given for 5 days . They are now more potent than old drugs like Amantadine and rimantadine . They usually given within 5 days of infection . It can be given as prophylaxis for elderly fragile patients ,to those with high co-morbidity like cardiopulmonary diseases .

Prevention no need for isolation of the patients but education of them to avoid coughing ,sneezing in the faces of the patients and good hand washing . Influenza vaccine is used seasonally to prevent influenza infection this is given yearly with change in its gene but it not protect against new strains gene mutated influenza viruses .

Avian influenza :

It changed haemagglutinin gene influenza virus called avian influenza (H5N1) where it infect poultry ,birds then it transmitted to infect human infection from human to human can occur but with lower incidence rate , this type of influenza is risky because it lead to acute respiratory failure which threaten life .It treated by oseltamivir ,influenza vaccine does not protect against avian influenza .

Swine influenza :

It is called H1N1 virus swine flu its gene mutation of influenza lead to infection of pigs and from there to human and from human to human cause pandemic infection and also it may cause respiratory failure . Treated by oseltamivir .