

SUMMARY

Epstein-Barr virus (EBV) is a member of the human herpesvirus with seroprevalence over 90%, during childhood in developing countries. Its clinical manifestations vary in different countries, cultures and socioeconomic settings.

Little is known about the epidemiology of EBV infection in Egypt.

The aim of the present study is to evaluate the clinical presentations, and risk factors of complications of EBV associated IM.

One hundred patients were selected according to clinical manifestations to participate in the study. Their diagnosis was confirmed by presence of immunoglobulin M (Ig M) antibody to EBV viral capsid antigen (VCA- Ig M) and/ or immunoglobulin G (Ig G) antibody to EBV viral capsid.

All patients were subjected to the following:

- Careful history taking.
- Thorough clinical examination.
- Laboratory investigations which were:
 - 1- A complete blood count, and blood film to detect the presence of atypical lymphocytes, and it 's percentage.
 - 2- Serum transaminase levels (aspartate aminotransferase [AST], alanine aminotransferase [ALT]).

3- Serologic testing for EBV that included IgM and IgG antibodies to the viral capsid antigen (VCA-IgG, VCA-IgM) was also performed.

- **Ultrasonographic examination**, to confirm the presence of splenic and hepatic enlargement .

In the present study, 100 patients diagnosed with acute EBV were chosen to participate in the study. They included 51 males and 49 females ; they have mean age of 4.8 ± 3.13 years, and nearly 90% of them developed infection before 9 years of age.

Regarding the clinical findings reported in our patients we, found that, all patients suffered from fever with mean duration of 8.1 ± 3.69 days.

Pharyngitis and tonsillopharyngitis were the second common manifestation (All but 2 patients were suffered from pharyngitis or tonsillopharyngitis), Cervical lymphadenopathy was the third most common manifestations (87.% had cervical LN), splenomegaly was detected in 52.0% of patients, hepatomegally was detected in 22% of patients, and rash was detected only, in 3.00% of IM patients (maculopapular and , not associated with antibiotic administration).

The present study found that patients had ,WBCs ranged from $1900/\text{mm}^3$ to $150000/\text{mm}^3$ (mean 12356.50 ± 7689.52) with leukocytosis in 41.0%. The atypical lymphocytosis was present in 49% of cases.

In this study only 41 of children having elevated hepatic aminotransferase with ALT ranging from 12 IU/L to 600IU/L with

mean 105.769 ± 138.7 and AST ranging from 11 IU/L to 400 IU/L with mean 79.781 ± 88.127 .

These data revealed that about 26% of cases associated with complications which were hematologic (no hepatobiliary ,central nervous system and obstructive air way problems had occurred in this study). Anemia with $Hb < 9$ g/dL occurred in 10.0% of our patients, thrombocytopenia (platelets < 100000 mm³) occurred in about 18% of our patients One of our patients had profound leucopenia (WBC was 1500).

All patients recovered uneventfully under supportive management, and symptomatic care.

In our study, the results showed that the duration of fever was significantly associated with the occurrence of complications (73% of complicated cases had fever more than 10 days). Also We found that children who were younger than 6 years had more frequent complications than older children (22 patients of the 26 complicated cases were ≤ 6 years).

In conclusion, EBV- associated IM affected children with favorite prognosis . However various complications occurred in 26% of cases (all were hematologic complications). Young age (≤ 6 years), and prolonged duration of fever, were risk factors for the occurrence of complications.

Further studies are need to be conducted in the future to evaluate risk factors of complications of EBV infection among children in Egypt . The clinicians should take proper action to decrease any possible morbidity or mortality if complication occur during the clinical course.