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Correlation between Clinical and Laboratory Data's of Infectious Mononucleosis - Like Syndrome

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Abstract: ***Infectious Mononucleosis (IM) or Infectious Mononucleosis like Syndromes represents a daily medical concern, mostly for general practitioners and infectologists. Infectious Mononucleosis is probably the most frequently encountered pathology in everyday practice. Therefore, can we consider it as a well-known pathology? Ironically, Infectious Mononucleosis is the most frequent misdiagnose. The misdiagnose consist either on Infectious Mononucleosis diagnose or in its differential diagnose, which often leads inappropriate treatment with antibiotics, considering that in most of cases Infectious Mononucleosis is self limited.***

Keywords: Mononucleosis, syndrome like, Albania

1. Introduction

Infectious Mononucleosis (IM) is an acute pathology, self-limited, which affects children and young adults and it is very well defined from the clinical, serological and hematological changes. Its clinical features are often represented by fever, sore throat, lymphadenopathy, splenomegaly, lymphocytosis and atypical morphonucleares in blood stream. Serological tests show the presence of heterophyle antibodies and also positivity of monospot tests.

A four folder rise of Anti EBV antibodies or the presence of Anti EBV IgM is a good indicator of acute Infection. On the other hand, there is a wide range of infectious agents which product IM like syndromes which are all characterized by the presence of atypical lmphocitosis in the blood stream. At this point, it is very important to distinguish Infectious Mononucleosis caused by EBV infection, from IM like syndromes caused by other infectious causative agents such as other viruses, bacteria or protozoan.

The diagnose of Infectious Mononucleosis in some cases is established immediately. Typical clinical manifestations such as sore throat, fever, lymphadenopathy, general weakness and atypical lymphocytosis associated with positive tests for heterophyle antibodies are decisive in establishing the diagnose.

Anyway, establishing the diagnoses of Infectious Mononucleosis is not always simple, especially the cases with atypical clinical presentations and negative heterophyle antibodies.

Infectious Mononucleosis, negative for heterophyle antibodies, can be caused by different agents. Good attention to clinical features and appropriate use and interpretation of laboratory data can bring us to an etiological diagnose in 85%-90% of all case with Infectious Mononucleosis.

Abstract

Infectious Mononucleosis (IM) is caused by EBV and usually affects children and young adults. Infectious Mononucleosis like Syndrome represents a clinical and laboratory manifestation of two or more infectious diseases of different etiologies (viral and non viral).

Even though Infectious Mononucleosis is well-defined in all its aspects (clinical, hematological and serological), there are many Mononucleosis like Syndromes which are introduced with the same clinical and laboratory features (fever, sore throat, lymphadenopathy, splenomegaly, lymphocytosis and atypical polymorphonucleares in blood stream)

We studied 104 patients hospitalized in our clinic as Mononucleosis like Syndrome. Discharge diagnoses resulted as Infective Mononucleosis 36.5 %, undifferentiated adenopathy 23%, Toxoplasmosis 15.3%, HIV 7.4%, CMV 1.9%, Streptococcal pharyngitis 1.9 %, follicular angina 7.4%, acute leucosis 1.9%. Clinical signs were dominated mainly by fever in 100% of cases, sore throat in 36.17%, adenopathy in 34.04%, hepatosplenomegaly in 24.04%.

2. Material and Methods

There are included 104 patients in the study. Purpose of this study is to find out, based on evidences of Infectious Diseases Service, the clinical and laboratory aspects of Mononucleosis and Mononucleosis-like syndromes too, their correlation, how it helps us a quick diagnosis and efficient therapy. These findings will hopefully be a good help for the general practitioners and specialists too, leading in this way to an early diagnose and efficient treatment.

Methods

For each patient a specific database was created, including several necessary parameters for our study. The study consists in a detailed description of clinical signs, symptoms and laboratory data of each possible disease. In this study we included 104 cases hospitalized in our clinic during years 2010-2012.

We selected the patients according to well defined criteria, but the basic critter was admission diagnose.

The discharge diagnoses in front of the admission diagnoses highlighted the difference between Infectious Mononucleosis and Mononucleosis like Syndromes (ex. HIV, Toxoplasmosis, Leucosis, Lymphadenopathies, follicular angina, viral infections by CMV, mononucleosis, streptococcal pharyngitis etc)

3. Results

In this study were included 104 cases. Their admission diagnose was Mononucleosis like syndrome.

After the clinical and laboratory diagnostic triage performed in our service, the respective diagnoses of these cases resulted in: Infectious mononucleosis in 38 cases or 36.5 %, followed by undifferentiated adenopathy in 24 cases or 23%, Toxoplasmosis 14 cases (15.3%), HIV 8 cases (7.4%), CMV 2 cases or 1.9%, Streptococcal pharyngitis 2 cases or 1.9 %, follicular angina 8 cases or 7.4%, acute leucosis in 2 cases or 1.9%

Clinical signs were dominated by fever in 100% of cases, followed by the sore throat in 36.17%, adenopathy in 34.04%, hepatosplenomegaly in 24.04% of cases, hepatic involvement in 38, 29% of cases and cervical lymphadenopathy in 23.40% of cases..

Laboratory evidence resulted in positive Anti EBV IgM in 21.27%, positive IgM for CMV 4.25% and positive IgM for Toxoplasmosis 10.63%.

Table 1: Demographic data, admission and discharge diagnose of 104 patients hospitalized during 2010-2012

GENDER	
Rate M/F	55/49
Age group	
15-25	30
26-36	38
37-47	22
48-59	10
> 60	4
Admission diagnoses	
Mononucleosis Like Syndromes	104
Discharge diagnoses	
Infectious mononucleosis	38
HIV	8
Toxoplasmosis	14
Acute leucosis	2
CMV infection	7
Streptococcal gharingitis	3
Follicular Angina	8
Undifferentiated Lymphadenopathy	24

Table 2: Discharge diagnoses of 04 patients hospitalized as Mononucleosis like syndromes

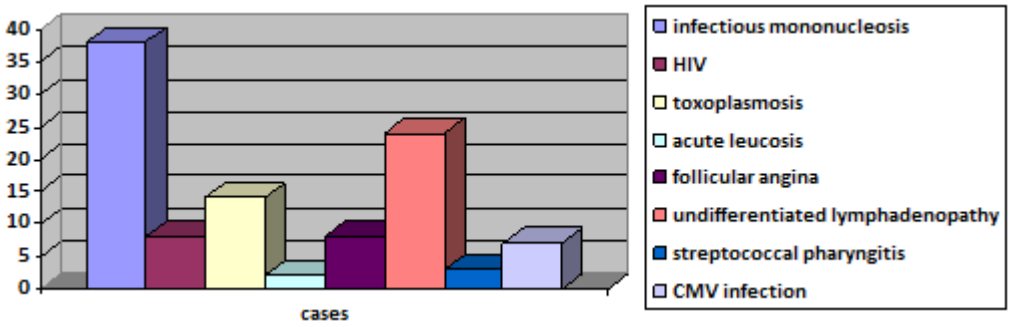

Table 3: Clinical and laboratory data association in discharge diagnoses

	Mononucleosis like syndromes	CMV infection	Toxoplasmosis	Streptococcic pharyngitis	HIV/ AIDS	Acute leucosis	Undifferentiated Lymphadeno-pathy	Follicular Angina
Clinical signs								
Lymphadenopathy	+++	+++	+++	++	+++		++++	
Fever	++++	++++	+++	++++	+++	++++	++++	
Tonsillopharyngitis	+++	++	++	++++	+++	+++	++	+++
Hepatomegaly	+	+			+		+++	
Splenomegaly	++	+			+		+++	
Cutaneous rash	+	---			++			
Sore throat	+++	++			++			
Headache	++	---		+++	+++			+++
Weakness	++	---		+++	+++	+++		+++
Jaundice	+	----	+++			+++	+++	+++
Hypertransaminasemia	+	---				+++		
Chills	----	---			++			
Vomits	+	---						
Myalgia	+							
Otitis media	++	----			+++			

Productive cough	---	---	+++	++++			+++	
Laboratory data								
Leucocytosis	++++	-----			+++	++++		
Lymphocytosis	++++	++++	++++				+++	+++
Anemia	++++	-----				++++		
Hypertransaminasemia	++	----				++++	+++	
Hyperbilirubinemia		-----						
Heterophyle Ac (1-st week)	++							
Heterophyle Ac (3-rd week)	++++	----						
Anti VCAIgM	positive	Positive	Positive		Positive			
AntiVCAIgG	positive	Negative	Positive		Positive			
PCR	----	----			+++			
FIB	----	----			++		+++	
ERS	----	-----			+++		+++	
Throat culture				Positive				Positive

(+ Encountered in 5-25% of cases)
(++++ Encountered in 100% of cases)

4. Conclusions

1) Infectious Mononucleosis is a very frequent pathology in everyday medical practice. It looks as a well defined pathology, according to clinical and laboratory data, but it represents a big concern in misdiagnoses.
2) The recognition of different pathologies which are manifested as Mononucleosis Like Syndromes, is very helpful, leading to a careful and critical triage of the patients.
3) To us, early and correct diagnoses of Infectious Mononucleosis, and the differences from IM like syndromes caused by other infectious causative agents such as CMV, Toxoplasma Gondi is very important, as it leads to efficient treatment of Infectious Mononucleosis and to early detection of potential life-threatening pathologies.

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