

Case Report

Aplastic Anemia following chickenpox infection- A case report

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Introduction:

Chicken pox is a commonly occurring viral infection seen among children⁽¹⁾. Usually it is a self limiting illness, however the various complications described among children following chickenpox infection are ataxia, encephalitis, pneumonitis, secondary bacterial infections rarely aplastic anemia^(1,2). The neurological complications are the commonest, while hematological complications are quite rare. Aplastic anemia is a rare complication following chickenpox infection⁽²⁾. We report a case of a seven year old male child who developed aplastic anemia following chickenpox infection.

A seven year old child presented to the pediatric OPD with complaints of paleness, lethargy. The child was the product of a non consanguineous marriage and was the only child of the parents. Both the parents

were school teachers. The family history was insignificant. There was no history of any drug exposure. Eight weeks ago the patient had presented to our OPD with chickenpox, chickenpox was diagnosed and the patient given symptomatic treatment. On examination we had a child with conjunctival and skin paleness, multiple ecchymotic patches all over body, no organomegaly.

Patient's investigations revealed a Hb of 6.2gm/dl, Total leucocyte count of $2.4 \times 10^9/l$, platelet count of 30,000 /cu .mm. The differential leucocyte count was Polymorphs 20%, Lymphocytes 78%, Monocytes 2%. The peripheral smear was suggestive of pancytopenia. The serum levels of liver function tests, renal function tests, LDH were normal. All the investigations are given in the following table.

Serial No.	Investigation	Result
1.	Haemoglobin	6.2gm/dl
2.	Total leucocyte count	$2.4 \times 10^9/L$
3.	Differential count	Poly- 20%,Lympho 78%,Monocytes 2%
4.	Peripheral Blood film	Features suggestive of pancytopenia
5.	Bone Marrow Findings	Hypocellular marrow without features of haemophagocytosis or myeloproliferative disorders
6.	ALT	32 IU
7.	AST	40 IU

8.	Blood Urea	24 mg/dl
9.	Serum Creatinine	0.7 mg/dl
10.	Total Bilirubin	1.2 mg/dl
11.	LDH	300 U/L
12.	Retic Count	1%
13.	HIV	Non Reactive
14.	HBSAg	Negative
15.	HBEAg	Negative
16.	HCV	Negative
17.	HSV-1 IgG	Positive
18.	HSV-1 IgM	Negative
19.	CMV IgG	Negative
20.	CMV IgM	Negative
21.	Varicella IgG	Positive
22.	Varicella IgM	Negative
23.	HSV -2 IgG	Negative
24.	HSV -2 IgM	Negative
25.	Chromosomal breakage studies	Negative

Discussion

Aplastic anemia is a disorder which can occur due to various factors, absence of haemopoietic progenitor stem cells, immune abnormalities, exposure to various drugs, as a consequence of viral infections⁽³⁾. Since our patient was healthy before infection aplastic anemia could have been caused by varicella infection. A number of specific viral agents have been linked to aplastic anemia namely hepatitis b, EBV, CMV, Hepatitis C etc. Various drugs have been linked to aplastic anemia notably gold, chloramphenicol, benzene. The role of viruses in causing aplastic anemia has not been fully elucidated but they may cause aplastic anemia by an underlying immune mechanism. Varicella associated hematological complications are rare but some cases of immune thrombocytopenia and disseminated intravascular coagulation have been reported

following varicella infection^(4,7,8). Ziebold et al have reported thrombocytopenia and anemia in children following varicella infection⁽⁵⁾. Hemachandran et al have reported a case of aplastic anemia following varicella infection, the patient also has a co existing wucheria bancrofti infection⁽⁶⁾. Kuskonmaz et al have reported a case of aplastic anemia following varicella infection⁽²⁾.

In spite of recent advances in experimental microbiology it has been difficult to pinpoint an etiological agent as the cause of aplastic anemia, most cases being idiopathic in nature. In our case varicella could be considered as the triggering factor for aplastic anemia as other major causes were ruled out.

This case represents an unusual complication of a common disease. Our patient was referred to higher center for further management.

References:

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