CASE REPORTS

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AUTOIMMUNE HAEMOLYTIC ANAEMIA With RETICULOCYTOPENIA

INTRODUCTION

Autoimmune haemolytic anaemia is charaterised by shortened red cell survival & the presence of antibodies directed against autologous red blood cells.

A positive Direct antiglobulin test is important for diagnosis.

Diagnosis of AIHA

Serological evidence of an autoantibody

- Positive DAT
- Positive Autocontrol

Clinical or Laboratory evidence of haemolysis

Symptoms

- Anaemia

Laboratory Features

Decreased

- Haemoglobin
- Haptoglobulin

Elevated

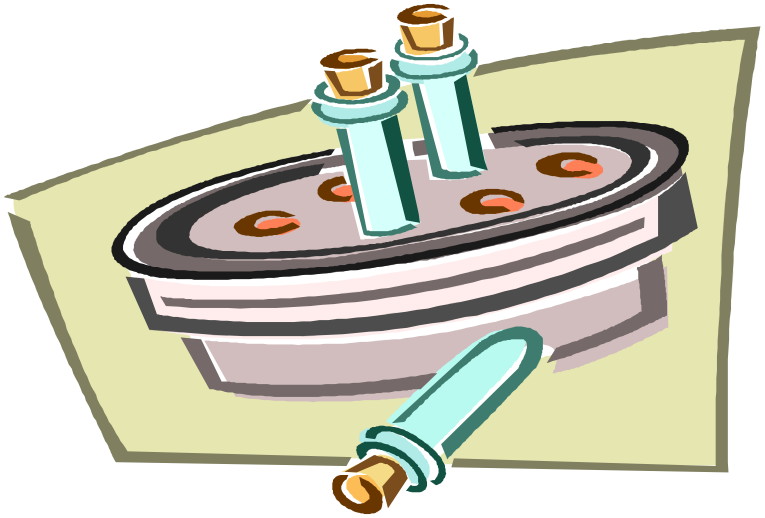
- Reticulocyte count
- Lactate dehydrogenase
- Unconjugated bilirubbin level
- Urobilinogen

CASE 1

81 year old male patient known case of IHD & COPD was admitted with chief complaints of

- Anorexia & cough with mucoid expectoration since one month
- DOE since 15 days
- h/o bone pain since 15 days

INVESTIGATION



CBC

Haemoglobin	**6.3g/dl**
PCV	**20.9% (40.0 - 54.0%)**
MCV	**102.5fl (76 - 96fl)**
Total Leucocyte count	8000/mm^3
Platelet count	210000/mm^3
ESR	**markedly ↑^{ed} 115mm at the end of one hour**
Reticulocyte count	**1%**

BIOCHEMICAL

S. Bilirubbin	
Direct	**0.7mg/dl (0.0 – 0.3)**
Indirect	**0.6mg/dl (0.1 – 1.0)**
Total	**1.3mg/dl (0.2 – 1.3)**
S.LDH	**989U/L (313-618U/L)**
Total Proteins	**6.8g/dl (6.3 – 8.2)**
Albumin	**2.9g/dl (3.5 – 5.0)**
Globulin	**3.5g/dl (1.5 – 3.5)**

CLINICAL IMPRESSION

Megaloblastic anaemia

r/o myeloma (in view of ↑ESR,
↑ Globulins, h/o bone pain)

Request was sent to the blood bank to cross-match & reserve 2 units of packed cells

IAT	**2+ (positive)**
DAT	**4+ (positive)**
Auto control	**positive**

Bone marrow aspiration & biopsy done showed cellular marrow Erythroid Hyperplasia. No abnormal cells seen.

Serum Iron & Serum Vit. B_{12} levels - Normal

Serum protein electropheresis did not show evidence of M BAND

Management

Inj. Methyl Prednisilone- 250mg⊠4 days was given.

2 days after methyl prednisilone

Haemoglobin rose to 7.4g/dl

Reticulocyte count 5.8%

Now the patient is doing well with

Hb – 11.8g/dl

Retic of 4%

And a maintenance dose of 5mg of prednisilone daily

IT TAKES ALL TYPES...

TO KEEP THE BEAT GOING

CASE 2

28 year old female patient known case of ITP since 2 years & on 40mg of prednisilone complained of generalized weakness & fatiguability since 15 days

Past h/o menorrhagia

Visited the haematologist 15 days prior to admission with h/o weakness

Hb- 8gm/dl (attributed to menorrhagia was put on Fe supplements)

LDH – 800u/L (313-618)

Was admitted 15 days later for increasing weakness and fatiguability

On admission

Hb	**4.5g/dl**
Total leucocyte count	**5100/mm^3**
Platelet count	**160000mm^3**
Retic count	**0.5%**
Bilirubbin	
Direct	**0.1mg/dl**
Indirect	**1.7mg/dl**
Total	**1.8mg/dl**
LDH	**422u/L (313-618u/L)**

Request sent to Blood bank for grouping & cross matching

DAT		4+ (positive)
IAT		2+ (positive)
Abscreen	Cell I	Positive 1+
	Cell II	Negative
	Cell III	Positive 1+
Auto control		Positive

ANA	Positive

Management

Patient was put on high dose steroids

Inj. Methyl Prednisilone 250mg ⌦ 4 days

2 units were found compatible

In view of reticulocytopenia ,decided to transfuse under close monitoring

2 units of packed cells were transfused

Haemoglobin of the patient rose to 5.8g/dl & was discharged with maintenance dose of steroids

A month later

Patient's

Hb	**9.1g/dl**
Platelet count	**80000/mm^3**
LDH	**531u/L**
Reticulocyte count	**6.5%**
IAT	**Negative**
DAT	**Positive 2+**

Autoimmune haemolytic anaemias usually show ↑ed Reticulocyte count

Nevertheless early in the course of the disease over ⅓rd of all patients may have transient reticulocytopenia despite having a normal or hyperplastic marrow

Reticulocytopenia may also be seen in patients with compromised marrow function due to underlying disease, parvovirus infection, toxic chemicals or nutritional deficiency.

Transfusion in patients with autoimmune haemolytic anaemia is generally unwise.
However reticulocytopenia with profound anaemia may present as a medical emergency in which prompt careful transfusion is life saving.

CONCLUSION

The key to successful management of patients with AIHA is good communication between the treating doctor & Blood Bank doctor.

In most instances it will be the responsibility of the transfusion services to initiate communication. Because the diagnosis of AIHA may first be made during compatibility testing for a requested transfusion.

THANK YOU