



STUDY OF 30 CASES OF THALASSEMIA PATIENTS UNDERGO SPLENECTOMY AND FOLLOW UP FROM 2010-2017

***Dr. Kadhum Falhi Zyarh ALmajedi**

M. B. Ch. B, H.D.G.S, Collage of Medicine University Baghdad, Kufa College of Medicine Department of Surgery -
Baladi Hospital- Baghdad, Iraq.

***Corresponding Author: Dr. Kadhum Falhi Zyarh ALmajedi**

M. B. Ch. B, H.D.G.S, Collage of Medicine University Baghdad, Kufa College of Medicine Department of Surgery - Baladi Hospital-
Baghdad, Iraq.

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ABSTRACT

- Thalassemia is one of most common inherited haematological disorders, that remain as a major health problem throughout the world.
- This study was conducted on patients admitted and operated upon at Ibn-Albalady hospital by the Dr-Kadhum Almajedi in surgical unit between April 2010 and September 2017.
- This study involving of 30 cases of splenomegaly operated upon on elective basis.

BACKGROUND

Many patients with Thalassemia major required splenectomy. Throughout the care of patients with thalassemia, the size of spleen should be carefully monitored by physical examination, and as needed by ultra-stenography. Splenectomy should be considered when: -

- Annual blood transfusion exceeds 1.5 times those of splenectomized patients. or more than 250ml/kg/year of packed red cells. Or more than 400ml/kg/year of whole blood.
- Splenic enlargement is accompanied by symptoms such as... left upper quadrant pain, massive splenomegaly with possibility of splenic rupture.
- Leucopenia or thrombocytopenia due to hypersplenism causing clinical problems like recurrent bacterial infections or bleeding.

Splenectomy should not be considered below the age of five years to ensure good immune system and to decrease risk of infections.

The main indication for splenectomy was:-

- Blood transfusion requirement was high.
 - Huge splenic size.
- A dramatic increase in the Hb level was occurred after the procedure, most of the patients had decrease in the amount and frequency of blood transfusion.
 - Quality of patients life improved after splenectomy because of improvement in Hb level, the patient felt less fatigue and were able to carry out their daily activities in better way.
 - Decreasing blood transfusion requirement were help

to reduce the hospital visits.

- The cost of Iron chelation therapy was also reduced.
- Most patients had improved school attendance and academic performance.
- Overall quality of life of the patients and their families were improved.

So, we recommended that the splenectomy should not be withheld if indicated.

AIMS AND OBJECTIVES

The aims of this retrospective study carried out on 30 splenectomized thalassemic patient in my ward of surgical unit was: -

- Study of age distribution.
- Study of sex distribution.
- To take an idea about preoperative patients Hb level, and effect of operation in improvement of this level.
- To take an idea about those patients with hepatitis virus C, and B, and those who were diabetic and their prognosis.
- To determine the effect of splenectomy on the patients in reducing the amount of blood transfusion.
- To evaluate the quality of life after splenectomy in regarding of complications and longterm effects.

PATIENTS AND METHOD

The medical record of 30 patients undergoes splenectomy at our hospital from April 2010 up to September 2017 were reviewed for the following: -

- Name.
- Sex.

- Indication for splenectomy.
- Preoperative investigation.
- Post-operative complication.
- Follow up chart of patients for long period.

RESULTS

From April 2010 to September 2017 30 thalassemic patients was undergo splenectomy in my ward at Ibn - Albalady hospital (thalassemia Center) of those: -

Sex distribution table (1).

Sex	No. of pt.	Percentage
Male	18	60%
Female	12	40%

Age distribution, table (2).

Age in year	No. of pt.	Percentage
6-10	6	20%
11-15	10	33.33%
16-20	9	30%
21-25	5	16.66%

Distribution according preoperative Hb level, table (3).

Preop. Hb level	No. of pt.	Percentage
5-8 gm/dl	18	60%
8.1-10 gm/dl	10	33.33%
10.1-12 gm/dl	2	6.66%

Distribution according to viral hepatitis and DM table (4).

Investigation	No. of pt.	Percentage
HCV +ve	10	33.33%
HBS Ag +ve	1	3.33%
Diabetic	4	13.33%

Indication of surgery, table (5).

Indication	No. of pt.	Percentage
Increase frequency of blood transfusion	24	80%
Huge spleen	6	20%

Distribution according to post-operative blood transfusion time interval, table (6)

Time interval	No. of pt.	Percentage
Long perioral (more than 6m)	1	3.33%
2m-6m	5	16%
1.5-2m	12	40%
1m-1.5m	10	33.33%
3w-1m	2	6.66%

Distribution according to early postoperative Complication, table (7).

Complication	No. of pt.	Percentage
Bleeding	-	-
Wound	4	13.33%
Chest infection	2	6.66%
Paralytic ilius	-	-
Pulmonary atelectasis	-	-

Distribution according to late post operatic Complication, table (8).

Complication	No. of pt.	Percentage
Fistula	-	-
Blindness	1	3.33%
Illusion	1	3.33%
Dorsal vertebral sever pain	1	3.33%
Splenosis	-	-

NB, Those Three late complications occur in patients who are HCV + ve and diabetic, they develop thromboembolic phenomena.

DISCUSSION

- This clinical study was undertaken at Ibn-Albalady hospital A total Number of 30 patients were considered with thalassemia major with various complains, and were operated upon (splenectomy) during the period between march 2010 and September 2017.
- In our series the male to female ratio was approximately 6-4, definite male preponderance has been noted by various other authors - table (1).
- In our series the patients age were between 6-25 years with an average of 18-5 years the reason for the older age of our patients, probably because delayed referral for splenectomy and un willingness of patients for major surgery- table (2).
- In our series Hb level of more than 93% of our patients was under 10 g/dl preoperatively. That's why we usually give from 1-4 bi eant y blood transfusion 1-4 days before surgery to ensure Hb level more than 10g/dl at operation, table (3).
- From our patients 10 of 30 was HCV +ve, 1 of 30 was HBs Ag +ve, and 4 of 30 was diabetic and was see that there are increase possibility of complication in such a patient. Table (8).
- In our series the main indication for surgery was: -
 - Higher blood transfusion requirement 80% while was more than 1 pint of blood /15days.
 - 20% of our patients are undergoes splenectomy because of excessive enlargement of spleen casing abd-pain and dyspnoea table No. (5).
 - In our study follow of patient done by 15 days interval for one month, than monthly for six month, then six monthly for whole period of study.

All the patient had improvement of Hb level from an average of 8.2 g/dl up to 10.5 g/dl the period for blood transfusion were become longer than before splenectomy 94-4% of patients required transfusion after more than 1 month up to two months. table (6).

Regarding early post-operative complication in our series 4 of 30 patient suffered from wound infection 2 of 30 patient suffered from chest infection this percentage was high, this may be due to lack of preoperative vaccination (pneumococcal, H.influenza, and meningo coccal vaccines) which should be given 4 weeks prior to operation.

On other hand splenectomized patients are at increased risk of infection in thalassenic person as compared to normal children table (7) But no one of our series had septicemia or risky infective complication.

In our series 10 of 30 patient were HCV +ve, 4 of them were also diabetic, three of of those 4 diabetic patients developed late post-operative complication in the form of

thromboembolic complication (one blindness, one illusion, and one sever dorsal vertebral pain) this probably due to polycytopenia occurred after splenectomy.

In late comers susceptible patient, we use Aspirin as preventative measure for thromboembolism and this give excellent result. Table (8)

- One of 30 patients was die after 4 years because of development of DM, sever respiratory infection, and followed by multiorgans failure.
- Longer follow up is required for better evaluation of long-term efficacy and late complication after splenectomy.

CONCLUSION AND SUMMARY

- Thalassemia major is quite common coalition effecting mainly pediatric age group both males and females are affected.
- Thalassemia patient usually suffering from splenomegaly because of increased RBC destruction, repeated blood transfusion Iron overload and exhramadallary haematopoiesis.
- Splenectomy definitely reduced blood requirement from 290ml/kg/year preoperatively to less than 140 ml/kg/year so the requirement for blood transfusion become less frequent improvement of Hb level also occur this improvement is sustained over a long period of time.
- To prevent post-operative infection, good preparation of patient, with vaccination 4week before sugary and 1 -4-pint blood transfusion given 1 -4 days before surgery in addition to brilliant use of An biotic post operatively.
- Those patients who are HCV +ve associated with DM, when they are undergo splenectomy, they are sussubtable for thrombotic complication more than other patient, that's why Aspirin should be given post operatively for such patient as protective measure.
- Patients health improved after splenectomy due to improvement in HB level. Decreasing of blood transfusion requirement help to reduce hospital visits therapy coast and hospitalization time most patient had improved school attendance and better academic performance.
- The splenectomy with proper indication, proper perpetration, dramatically improves the quality of life of the patients as well as their families.
- So, we strongly recommended that the splenectomy should not be withheld if indicated.

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