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ACUTE SPLENIC SEQUESTRATION IN ADULT

General Surgery

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ABSTRACT

Introduction: Acute splenic sequestration is a complication of sickle cell syndromes. it is defined by a sudden increase of more than 2 cm in the size of the spleen, and a drop in hemoglobin level of at least 2 g/dl. we report a case of splenic sequestration managed by surgery after failure of transfusion procedures. **Observation:** A 20 year-old man with homozygote sickle cell syndrom admitted in intensive care unit for acute anemia and left upper abdomen pain, after transfusion and rehydratation, we note no improvement in the hemoglobin level and the appearance of fever and abdominal contracture. Emergency splenectomy reveal signs of early splenic infarction. **Conclusion:** Even if it is rare in adults, splenic sequestration may impose splenectomy if there is a clinical and biological aggravation after transfusion.

KEYWORDS

Sickle Cell Syndrom, Splenic Sequestration, Splenectomy, Transfusion, Splenic Infarction.

INTRODUCTION

During major sickle cell syndromes, splenic sequestration is an acute complication defined by the occurrence of a sudden increase of more than 2 cm in the size of the spleen, and a drop in hemoglobin level of at least 2 g/dl [1]. It has been reported in children by several authors but it is uncommon in adult [2]. We report an observation of a patient with sickle cell syndrom who was admitted in critical care unit for acute anemia and abdominal pain and and who required emergency splenectomy after clinico-biological worsening and appearance of abdominal contracture.

Observation

Two days after being hospitalized in intensive care, the practitioner noted that there was no improvement in the blood count figures and that despite a transfusion of 6 packed red blood cells the hemoglobin figures remained at 8.5g/100ml while the hemoglobin on admission was 9g/100ml. At the same time there was a worsening of pain in the left hypochondrium and the appearance of abdominal contracture, a fever at 38°C.

An abdominal scan was carried out and which revealed a very enlarged spleen with vascularization troubles in its parenchyma (figure 1-2).

Figure 1 : Enlarged Spleen in CT Scan

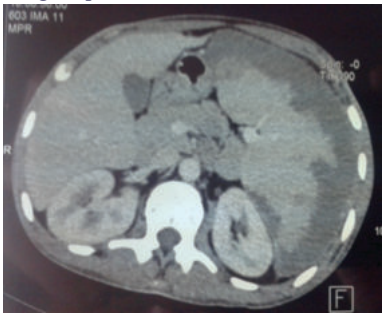

Figure 2 : Abnormal Vascularisation of Spleen After Injected CT Scan

After consultation between the intensivist, the radiologist, the internist and the surgeon and given the abdominal contracture, surgical exploration was indicated urgently.

The classic median laparotomy performed found a spleen reaching up to the pelvis with areas of infarction(figure 3-4).

Figure 3 : Surgical Liberation of Spleen

Figure 4 :Specimen with Infarction Areas

The intraoperative transfusion was effective and resulted in a correction of hemoglobin to 11g/100ml after 3 packed blood cells.

The splenectomy specimen was sent for anatomopathological examination and which found a splenic parenchyma site of expansion and congestion of the red pulp with sequestration of red blood cells in the cords and sinuses(figure 5).

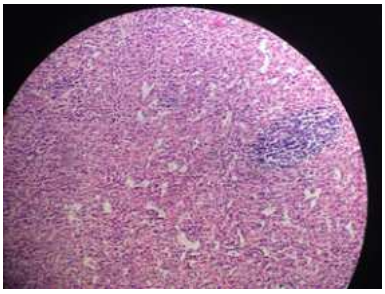

Figure 5 : Red pulp with Sequestration of Red Blood Cells (G*100)

The operative consequences were unremarkable and the patient left the hospital after vaccination and under antibiotic prophylaxis at J+5.

DISCUSSION

Hemoglobin S-C disease is a hereditary disorder characterized by chronic mild hemolytic anemia and infrequent pain crises, Complications of the disease include acute splenic infarction or sequestration[3].

Persistent splenomegaly in patients with sickle cell syndrome makes them liable to develop splenic complications such as hypersplenism, splenic sequestration crises, and splenic abscess[4].

Acute spleen sequestration can induce extreme life-threatening anemia in homozygous sickle cell disease patients and should be suspected when acute abdominal pain, acute severe anemia, and enlarged spleen are associated. Prompt splenectomy should then be considered as red blood cell transfusion can fail to correct anemia and because of the high risk of recurrence[5].

Splenic complications of sickle cell anemia are known to be associated with an increased morbidity and in some it may lead to mortality. To obviate this, splenectomy becomes an essential part of their management[6]

As a result of the relative rarity of adult acute splenic sequestration crisis , physicians are often unfamiliar with the entity and consequently fail to recognize it or include it in their differential diagnoses, thus increasing its morbidity and mortality risk [7].

CONCLUSION

Splenectomy should be discused as a viable option in the management of acute splenic sequestration crisis when transfusion fails and if acute surgical abdomen is suspected.

Disclosure

This article does not contain any patient identifiers nor was the patient care affected or influenced in any way

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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