

Case study

Macrophagic activation syndrome revealing Hodgkin lymphoma:

Case report

ABSTRACT

1- Objectives,???????

Macrophage activation syndrome (MAS), or hemophagocytosis syndrome, is a clinical-biological entity characterized by proliferation and non-specific activation of macrophages of the reticulo-histiocytic system, with phagocytosis of formed blood elements. It is a rare pathology associating clinical signs: fever, hepato-splenomegaly, lymphadenopathy and biological abnormalities (bi- or tricytopenia, hepatic cytolysis, elevation of LDH, coagulopathy) with an image of hemophagocytosis on a cytological or histological sample. None of these signs are specific. However, the association with hypertriglyceridemia and hyperferritinemia is very strongly suggestive of SAM. This syndrome can be primary in children or secondary to various conditions at any age. Viral infections by herpes viruses (especially Epstein-Barr(EBV) and cytomegalovirus), by intracellular

Comment [I1]: 196 WORDS IN THE SUMMARY- COMPLIES WITH THE GUIDELINES OF THE JOURNAL.

The abstract (maximum 250 words) of the Case Reports must contain the following sections:

- 1- Objectives,
- 2- Presentation of the Case,
- 3- Discussion and Conclusion.

1- does not have defined goals.

2- PLACE MAYUSCULA AT THE BEGINNING OF EACH WORD OF THE DISEASE NAME.
Macrophage Activation Syndrome (MAS)

3- each abbreviation must have its description in the first opportunity that it appears in the text.
Ex. LDH ??

4- Keywords? They were not placed in the article

Comment [I2]: (EBV) SUGGESTION

germs (tuberculosis), but also by the pyogenic bacteria are, together with neoplasias (lymphomas mainly) and some autoimmune diseases (lupus and Still), the main causes of SAM to look for. If T or NK lymphomas are the classic causes of reactive SAM, its association with Hodgkin's lymphoma is exceptional. It is a diagnostic and therapeutic emergency given the risk of progression to fatal multi-visceral failure in the absence of rapid treatment. We report here a case of SAM that revealed Hodgkin's lymphoma (LH) in a 5-year-old child.

KEY WORDS?????

Comment [I3]: KEY WORDS?????

RESEARCH OBJECTIVE ??????????

(LH) SUGGESTION

INTRODUCTION

Macrophage activation syndrome (MAS) is a rare disease [1], characterized by a very exaggerated and uncontrolled immune response. It is potentially fatal if not quickly treated [2]. If lymphomas are classic causes of MAS, the association with Hodgkin's lymphoma (HL) is exceptional [3].

Case report

Comment [I4]: IT IS NOT INTRODUCTION BUT A SUMMARY. ONLY TWO LINES WITH 3 REFERENCES.

THERE ARE SUFFICIENT CASE REPORT ARTICLES, WHICH COULD HAVE MORE REFERENCES IN THE INTRODUCTION.

IT SEEMS THAT THE ABSTRACT THERE IS MORE INFORMATION THAN THE INTRODUCTION

Comment [I5]: The patient or her guardian was oriented and had knowledge of the study to be carried out. Was the study approved by the hospital's Ethics Committee???

NAME OF THE HOSPITAL WHERE THE STUDY WAS PERFORMED, DEPARTMENT, LABORATORIES, HOSPITAL LOCATION, PROVINCE AND STATE OF THE RESEARCH.

Comment [I6]: ETHICAL APPROVAL...???

This section is mandatory for medical journals.

All manuscripts dealing with the study of human beings must be accompanied by the approval of the Research Ethics Committee (CIR) or Ethics Committee,

Approving Committee and the assigned study number must accompany the submission

The patient is a boy aged 5 and a half, who presented 36 days before admission with a prolonged fever. On clinical examination, the child

is febrile at 39.5°C, splenomegaly and cervical lymphadenopathy. The biological assessment showed hypochromic microcytic anemia with hemoglobin level at 7.6 g/l. Mean corpuscular volume is 70 fl and mean corpuscular hemoglobin content is 23 pg, hyperferritinemia 1366 ng/ml, thrombocytopenia 98 g/l, hypertriglyceridemia 3.16 g/l, sedimentation rate 100mm in the first hour, fibrinogen 7.5 g/l, c-reactive protein 328 mg/l. Hepatic cytolysis (Aspartate aminotransferase 251 ui/l, alanine aminotransferase 182 ui/l, LDH 1054 ui/l), and hemophagocytosis in the bone marrow. Thus, in the presence of Henter et al's [7] five criteria, the diagnosis of macrophage activation syndrome was made. The etiological assessment revealed a reactivation of the Epstein-Barr virus (EBV), raising the suspicion of lymphoma. On the cervico-thoraco-abdominal CT scan, appearance in favor of homogeneous hepatosplenomegaly (Figure 1) with above and below diaphragmatic lymphadenopathy (Figure 2). Cervical lymph node biopsy: in favor of scleronodular type Hodgkin lymphoma. The patient was transferred to the pediatric oncology department.

Comment [I7]: WRONG: MUST SAY: °C

Comment [I8]: fl ??? 70 fl (femtoliters)
Pg = ??? picogramas)

Non-standard abbreviations must be listed and the full form of each abbreviation must be given in parentheses upon first use in the text.

Comment [I9]: ui/l ??? DEVE DIZER: UI/L

Comment [I10]: LDH = HIGH DENSITY LIPOPROTEINS

Non-standard abbreviations must be listed and the full form of each abbreviation must be given in parentheses upon first use in the text.

Comment [I11]: ERROR : Henter et.als [7]

Comment [I12]: DOES NOT COMPLY WITH JOURNAL GUIDELINES.

IT IS WRONG: IT MUST SAY: CERVICO-THORACO ABDOMINAL SCAN (CT). The abbreviation is CT.

JOURNAL NOTE.

Non-standard abbreviations must be listed and the full form of each abbreviation must be given in parentheses upon first use in the text.

Comment [I13]: The patient or her guardian was oriented and had knowledge of the study to be carried out. was the study approved by the hospital's Ethics Committee???

NAME OF THE HOSPITAL WHERE THE STUDY WAS PERFORMED, DEPARTMENT, LABORATORIES, HOSPITAL LOCATION, PROVINCE AND STATE OF THE RESEARCH.

DISCUSSION

The standard definition of SAM is based on the criteria of Henter et al., 2004 [3]. Diagnosis is possible when at least five of the following signs are present: fever, splenomegaly, cytopenia (at least two of: hemoglobin less than 9 g/dl, platelets less than 100 G/l, neutrophils less than 1 G/l, hypertriglyceridemia (greater than 3 mmol/l) or hypofibrinogenemia (lower than 1.5 g/l), hyperferritinemia (greater than 500 µg/l), increase in CD25 (greater than 2400 IU/ml), decrease in NK lymphocyte activity and the presence of hemophagocytosis in the bone marrow, spleen or lymph nodes. Hypertriglyceridemia and hyperferritinemia are the most suggestive abnormalities of SAM when associated with cytopenias [4] as is the case of our patient. The liver balance sheet is always disturbed during SAM. Usually the LDH level is high. When the diagnosis of SAM is made, the search for the triggering element is imperative for the prognosis. In the case of our patient, infection with the Epstein-Barr virus was the triggering factor.

The study by Takahashi et al. [] ??? had clearly demonstrated the difference in prognosis between lymphoma-related SAM versus other SAM etiologies. In these SAMs, the median survival was short (83

Comment [I14]:
ERROR IN THE REFERENCE : IN THE REFERENCE [3] IT IS NOT FROM HENTER et.al [3] but the REFERENCE [7]

-ERROR DATE: 2007

[3]- Martinaud, C., et al. "Syndrome d'activation macrophagique révélant une maladie de Hodgkin chez un sujet âgé." La Revue de médecine interne 32.2 (2011): e15-e17.

[7] Henter Ji, Horne A, Arico M, Egeler RM, Filipovich AH, Imashuku S, et al. HLH-2004: diagnostic and therapeutic guidelines for hemophagocytic lymphohistiocytosis. *Pediatr Blood Cancer* 2007;48:124

Comment [I15]: ERROR: G/l MUST SAY: g/L

Comment [I16]: ??? CD25 ????

Comment [I17]: ERROR: [5]

days), like overall survival (8%), which differed from other SAMs linked for two thirds to viral infections and associated with 83% overall survival [5]. Among MASsecondary to lymphomas, the discovery of HL is an exceptional situation, the most common being T or NK lymphomas [6]. The LH associated with a SAM seems a particular entity. In all cases, HL precedes or is contemporary with the discovery of SAM. Another particularity is the very strong association with EBV, which again contrasts with the classic forms of LH (20–40%) [7]. The presence of EBV raises the hypothesis of an immune deficiency with respect to EBV, thus patients with a history of infectious mononucleosis presenting a high risk of developing LH [8]. Finally, the evolution is rarely favorable.

Comment [118]: SAM OR MAS ??????

CONCLUSION

The diagnosis of SAM should be considered in the presence of persistent fever associated with characteristic biological signs. When the diagnosis of SAM is retained, all means must be implemented to

identify the triggering cause, the possibility of an exceptional LH should not be ruled out.

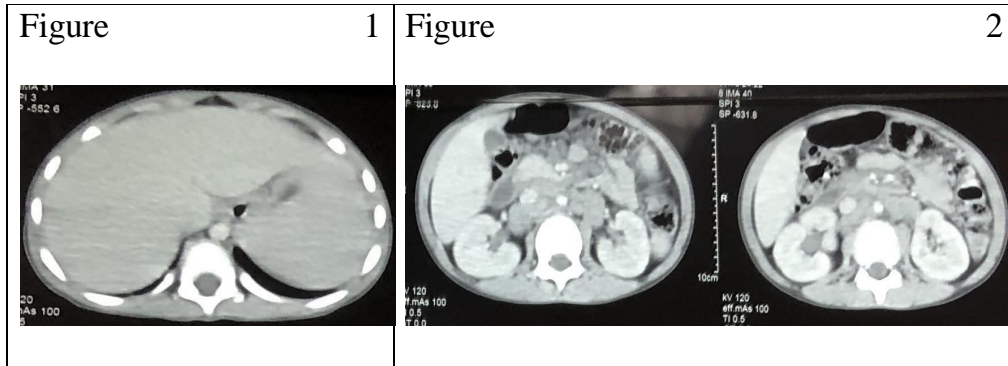


Fig 1 and 2: The cervico-thoraco-abdominal CT scan (CT) OU CERVICO-THORACO-ABDOMINAL SCAN (CT)

Comment [I19]: CONCLUSION???. IF YOU SHOULD MAKE CONCLUSIONS ACCORDING TO THE RESEARCH RESULTS WHAT ARE THE CONCLUSIONS IN THE 5-YEAR-OLD CHILD'S CASE?????

Comment [I20]: OES NOT COMPLY WITH JOURNAL GUIDELINES. 4-); and all illustrations, figures and tables are placed within the text at appropriate points, not at the end.

Comment [I21]: Each figure should have a number and a brief description, and then describe the meaning of that figure. In this case: as seen in figures 1 and 2 of this article, IT IS TO SAY AN EXPLANATION ABOUT THIS CERVICO-THORACO-ABDOMINAL TOMOGRAPHY

Comment [I22]: THIS DESCRIPTION SAYS NOTHING ABOUT THE TOMOGRAPHIES SHOWN. DOES NOT MEET THE INDICATIONS OF THE JOURNAL IN THESE FIGURES. ETHICAL APPROVAL...??? This section is mandatory for medical journals. All manuscripts dealing with the study of human beings must be accompanied by the approval of the Research Ethics Committee (CIR) or Ethics Committee. Approving Committee and the assigned study number must accompany the submission. 4-); and all illustrations, figures and tables are placed within the text at appropriate points, not at the end.

CERVICO-Thoracoabdominal Computed Tomography TACT

??????? OUCT

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- [1] Chargui, Soumaya, et al. "Syndrome d'activation macrophagique d'origine infectieuse." *Ann. Afr. Med* 15.1 (2021): e4470. (error)
- 2 Gonzalez F, Vincent F, Cohen Y. Syndrome d'activation macrophagique d'origine infectieuse/ étiologies et prise en charge. *Réanimation* 2009 ;18(4) : 284-290. ok
- 3 Martinaud, C., et al. "Syndrome d'activation macrophagique révélant une maladie de Hodgkin chez un sujet âgé." *La Revue de médecine interne* 32.2 (2011): e15-e17. (error)
- 4 Demirkol D, Yildizdas D, Bayrakci B, Karapinar B, Kendirli T, Koroglu TF, et al. : Hyerferritinemia in the critically ill child with secondary hemophagocytic

Comment [123]: Syndrome d'activation macrophagique d'origine infectieuse : a series from the Charles Nicolle Hospital, in Tunisie Infection-related hemophagocytic syndrome: a case series from Charles Nicolle Hospital

Soumaya Chargui¹, Anis Haris¹, Imene Bourkhis¹, Samira Azzabil¹, Lamia Ben Hassine¹, Ezeddine Abderrahim (6 AUTHORS, ALL MUST APPEAR IN THE QUOTE IN THE ARTICLE)

JOURNAL STANDARD:

For published article:

1. Hilly M, Adams ML, Nelson SC. A study of digit fusion in the mouse embryo. *Clin Exp Allergy*. 2002;32(4):489-98.

Note: List the first six authors followed by et al.

Note: Use of the DOI number for the full-text article is encouraged. (if available)

Note: Authors are also encouraged to add another database's unique identifier (such as PUBMED ID).

REF. 2 ok

REF.3

Syndrome d'activation macrophagique révélant une maladie de Hodgkin chez un sujet âgé - 01/21/11
Macrophage activation syndrome as the presenting feature of a Hodgkin's lymphoma in an elderly patient
Doi: 10.1016/j.revmed.2010.03.460

C. Martinaud; J.-M. Cournac b, S. Pons a, T. Gaillard a, C. Darles a, J.-P. by Jaureguiberry b, P. Brisou

[7] AUTHORS) 6 initial names are registered and added, et.al.

lymphohistiocytosis/sepsis/multiple dysfunction syndrome
/macrophage syndrome what is the treatment? Crit Care
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89 ok; old data????

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31 ok

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Comment [124]: EXPAND REFERENCES