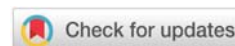




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Research Article

HELLP syndrome, A Real General Disease that Threatens the Maternal Morbidity and Mortality at the EHU in Oran

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Introduction

Hellp Syndrome (hemolysis, elevated liver enzymes, low platelet count) is an obstetric emergency. It is a form of severity of preeclampsia, its diagnosis is difficult because the biological picture is often incomplete and rough [1-6]. Several classifications have emerged, the best known is that of MISSISSIPPI. [7-10], defined by:

Class 1: la plus grave, avec :

Platelet count $1 \text{ à } \leq 50,000/\text{ml}$. ASAT or ALAT $\geq 70 \text{ IU/L}$. LDH $\geq 600 \text{ IU/L}$.

Class 2: Platelet count $500,000/\text{ml} - 100,000/\text{ml}$. ASAT or ALAT $\geq 70 \text{ IU/L}$. LDH $\geq 600 \text{ IU/L}$.

Class 3: Platelet count $100,000/\text{ml} - 150,000/\text{ml}$. ASAT or ALAT $\geq 70 \text{ IU/L}$. LDH $\geq 600 \text{ IU/L}$.

It is a syndrome that is often very progressive, sometimes hyperacute in the form of a multi-visceral failure syndrome. This pathology is endowed with a heavy maternal fetal morbidity and mortality. Maternal morbidity is all the more severe as the diagnosis is made late [11]. HS is associated with 40% of severe maternal complications [12], compared to 10% in isolated severe pre-eclampsia. Incomplete or partial forms have a more favorable maternal prognosis than complete forms correlated with the severity of preeclampsia.

Regardless of biological criteria [13]. HS complications are related to systemic failure caused by disseminated microangiopathy. Multi-visceral gravidar failure is an evolution

of the disease beyond HS and not an intrinsic complication of HS [14].

The main objective of our study is to determine the incidence of complications related to the HELLP syndrome at the gynecological obstetrics department of the University Hospital Oran.

Patients and methods

Type of study

We conducted a cross-sectional study over 4 years from January 1st, 2015 to December 31st, 2019, in the Gynecology and Obstetrics Department of the Oran EHU, in patients with HS.

Study population

The study concerns all patients with pre- or post-partum HS who were admitted to the Gynecology and Obstetrics Department of Oran EHU.

Criteria for non-inclusion are:

- Class III HS according to the MISSISSIPPI classification.
- Thrombocytopenia due to another cause (congenital, thrombocytopenic purpura, uremic hemolytic syndrome, hepatic steatosis).
- An elevation of ASAT and LDH due to another cause.

We first describe the clinical characteristics of the population, including all the patients included in the "2013 to 2016" study, with the study



Factors studied

maternal and fetal complications related to HS: complications considered were maternal deaths, neurological complications (eclampsia, retro placental hematoma, sub-capsular hematoma of the peroperative and fetal liver (in utero death, spontaneous or iatrogenic prematurity and intrauterine growth retardation)

Sample size

Taking into account the prevalence of PE reported in the literature, we calculated that at least 165 cases of pregnant women should be included.

Practical organization

The patient with HS is examined rapidly, and her file is seen by the resuscitator, who assesses the degree of urgency and determines, in collaboration with the obstetrician, the orientation, either in intensive care unit or in GHR unit, or in the operating room or at the delivery block.

The unit of high-risk pregnancies

The major role of the resuscitator who must initiate emergency therapy is:

- The stabilization of the lesion with antihypertensive therapy with the electric syringe and orally with a monitoring of the vital parameters.
- Corticotherapy for pulmonary maturity and targeted platelet.
- Transfusion of platelet pellet in HS type 1 (thrombocytopenia ≤ 50000).
- Monitoring of the clinical and biological evolution of HS that is unpredictable
- The search for complications: .eclampsia ,oedema of the lung ,

placental retro hematoma, renal failure ,hematoma under-capsular liver.

This involves the collaboration of the departments of biology, biochemistry of hemobiology, radiology, hematology and transfusion center.

The passage to the operating room: The treatment of HS is represented primarily by the termination of pregnancy but this decision may be shifted in certain cases, after a multidisciplinary decision of the resuscitator, the obstetrician and the pediatrician. The important role of the resuscitator-anesthesiologist in the operating room, which often represents more than 50% of the decision-to-birth time, must be taken into account by the choice of the type of anesthesia according to the context, and the management of the per and post complications. procedure.

Criteria for transfer to intensive care: It is recommended to anticipate and organize the continuous surveillance

of patients presenting or likely to have one or more organ failures, related to a severe obstetric pathology, or with a maternal pathology complicated by pregnancy, and to orient the patient to a resuscitation unit in the event of persisting organ failure requiring replacement, multi-visceral failure or life-threatening conditions according to the agreement established between each unit of obstetrics and an adult intensive care unit, especially if the establishment where the maternity ward is located has it.

Statistical analysis: The descriptive analysis of the variables is done by calculating frequencies, characteristics of central tendency or dispersion: the mean (m), the median (me), the variance (σ^2), the standard deviation (σ) as well as the determination of the confidence intervals (95% CI) around the mean, and the median (me) for the risk $\alpha = 0.05$ for the quantitative variables.

The determination of frequencies and confidence intervals for qualitative variables.

The confidence interval around the mean is shown by the Standard Deviation around the mean (mean \pm SD).

Result

Population of the study population

During the study period, we collected 165 cases of HS out of a total of 20,283 deliveries. The estimated incidence of this syndrome is 0.8%, or 1 case for 116 pregnancies. We found 167 pre-eclamptic patients admitted during the same period, the incidence of HS in pre-eclamptic patients collected during the same period is 14.13%.

Of these 165 patients, 121 (73.3%) were transferred from another peripheral health facility. And 44 patients (26.7%) were referred to the specialized consultation service of the Oran EHU,

Our patients are mainly multiparas; the frequency of the multiparity is 45%, the nulliparous is 28.5% and the primiparity is 26.5%. The average parity in our patients is 2 ± 1 children with extremes ranging from 0 to 9 with a median of 1. The average age of our patients is 32 ± 6.33 . Pregnancy was not regularly followed in 97 patients, or 59%. HS was diagnosed at an average term of 33 weeks of amenorrhea.

Incidence of maternal complications

In our study, 105 patients had complications, 63.6% of which included maternal deaths (n = 10),

We noted 38 cases of eclampsia: (23, 03%), 20 cases of HRP (12.12%), 17 patients complicated of CIVD (10.3%), and 10 patients complicated with PAO: HSCF was found in 11 patients (6.06%), and retinal detachment was found in 2 patients (1.21%) and encephalopathy in 3 patients (1.81%). The diagnosis of acute pulmonary edema is based on clinical and radiological data. Abdominal ultrasound was performed systematically, in view of the persistence of abdominal pain in search of HSCF.



CIVD was defined by the combination of thrombocytopenia less than 100,000 platelets / mm³, fibrinogen < 3g / L, the presence of fibrin degradation products or D-dimer > 3 µg / mL.

It is noted that acute renal failure diagnosed with RIFLE criteria was the most frequent complication found in 62 patients (37.75%), which was established after an average delay of 4.5 after admission of HS. , Diuresis was retained in 9 patients while 53 parturients was oliguric three patients required extrarenal treatment with an average of 6 ± 2.2 sessions per patient, 1 has evolved to chronic renal failure,

Impact of fetal complications

The rates of prematurity (often iatrogenic), IUGR and MFIU, were 52, 7%, 87.4% and 26% respectively and noted 23 newborns who died at birth,

Discussion

Our results are consistent in part with those of the Leboterf series [15], in 2003, Kirkpatrick [16], in 2008 and Roopa [17], in 2010, with an incidence of HS in relation to the number of pregnancies ranging from 0.2 to 1% of pregnancies.

In 2012, in a retrospective Moroccan study in 2008, Mamouni [18], out of 61 cases found an incidence of 0.27%, of which 67% were transfers from peripheral maternity hospitals.

In our study, 105 patients had complications, 63.6% which is similar to the Mamouni study 117 with 74% of the complications, and the study of Hani bilal [45] with 52%. But our results are superior to the study of Sibai [19], in 1993 and Beucher [13], in 2008 who found that HS is associated with 40% of maternal complications.

The authors [13,20], find that the complications are all the more important that the diagnosis is made late. This shows that the discovery of HS is late in our context. So we attribute the complications in our study to a late consultation, a non-monitoring pregnancy or a deceptive clinical picture that is certainly at the origin of a late evacuation.

In our series, acute renal failure was the most common complication with 39.4%. This is consistent with a Tunisian study done in 2000 by Ben letaifa [21], who found that acute renal failure was more frequently found in 1/3

cases. This is explained by the authors, by the constant association, with the vascular-renal disease, of a dehydration favored by the digestive disorders.

Conclusion

The incidence of HS in our institution is high by around 0.8%, due to a high frequency of peripheral transfers, which is a clear invitation to action to improve screening, surveillance and treatment at the periphery

HS is a serious disease for the mother since it can present itself in the form of a multi-visceral failure, and fatal for the fetus, the precocity of the treatment is the only guarantee of a better prognosis.

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