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 MISSISSIPI. [7-10], defined by:

Class 1: la plus grave, avec :
- Platelet count ≤ 50,000/ml . ASAT or ALAT ≥ 70 IU/L. LDH ≥ 600 IU/L.

Class 2: Platelet count 50,000/ml - 100,000/ml . ASAT or ALAT ≥ 70 IU/L . LDH ≥ 600 IU/L.

Class 3: Platelet count 100,000/ml _150000/ml . ASAT or ALAT ≥70 l. LDH ≥ 600 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 sometimes associated with a primary clay dyscrasia and a maternal-fetal 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-obstetric 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 MISSISSIPI 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, then we 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:

- 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 ≤ 50 000).
- Monitoring of the clinical and biological evolution of HS that is unpredictable
- The search for complications: eclampsia, oedema, and of the lung, placental retro hematoma, renal failure, and haematomaunder-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 offers 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-vascular 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 (σ²), 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 α = 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 ± 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 preeclamptic 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 28.5% and the primiparity is 26.5%. The average parity in our patients is 2 ± 1 children with extreme 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.

Incidences 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 with 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 was based on clinical and radiological data. Abdominal ultrasound was performed systematically, in view of the persistence of abdominal pain in search of HSCF.

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

It is noted that acute renal failure was 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 days after admission of H.S., Diuresis was retained in nine patients while 53 parturients were 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 MEIU, were 52%, 7%, and 26%, respectively and noted 23 newborn deaths.

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 by Mamouni [18], out of 61 cases found an incidence of 0.27%, of which 67% were transferred from peripheral maternity hospitals.

In our study, 105 patients had complications, 63.6% which is similar to the Mamouni study [17] with 74% of the complications, and the study of Hani bilal [19] with 52%. But our results are superior to the study of Sibaï [19], in 1993 and Beucher [13], in 2008 who found that HS is associated with 40% of maternal complications.

The authors [13,20], found that the complications are all the more serious when the diagnosis is made late. This shows that the incidence of HS is late in our context. So we attribute the presence of this complication to a late consultation, a non-monitoring policy that certainly influenced the origin of a late evacuation.

In our series, acute renal failure was the most common complication with 39.6%. This is consistent with a Tunisian study by Dejneko in 2000 by Benletifa [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 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 of the periphery.

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

References


