HELLP SYNDROME: OBSTETRIC CHARACTERIZATION AND TREATMENT MODALITY

SÍNDROME HELLP: CARACTERIZAÇÃO OBSTÉTRICA E MODALIDADE DE TRATAMENTO

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ABSTRACT

Objective: To describe the obstetric profile and types of treatment of women with HELLP syndrome. Method: descriptive and retrospective documentary study, with a qualitative approach, consisting of 52 medical records of women at a public maternity, diagnosed with HELLP Syndrome. The data were obtained by means of a form. A quantitative analysis was performed using SPSS software version 20.0. The data were organized in tables and discussed with the literature. Results: most women were multiparous (27%), had cesarean delivery (41%), maternal deaths (13.5%); regarding the type of treatment, surgical procedures (73.1%) and laboratory tests (90.4%) stood out. For pharmacological treatment, the following medications prevailed: hydralazine 20mg (78.4%); magnesium sulphate 50% (70.8%); and others (80.4%). Conclusion: the results reveal that maternal and perinatal morbidity and mortality stand out as a major public health problem. Descriptors: Epidemiology; HELLP Syndrome; Obstetrics.

RESUMO

Objetivo: descrever o perfil obstétrico e tipos de tratamento de mulheres com Síndrome HELLP. Método: estudo documental, descritivo e retrospectivo, com abordagem qualitativa, constituído de 52 prontuários de mulheres, em uma maternidade pública, diagnosticadas com Síndrome HELLP. Os dados foram obtidos por meio de um formulário. Foi realizada análise quantitativa dos dados com emprego do Programa SPSS versão 20.0. Os dados foram organizados em tabelas e discutidos com a literatura. Resultados: observou-se que a maioria das mulheres foi multiparas (27%), parto cesáreo (41%), óbitos maternos (13.5%); quanto ao tipo de tratamento houve destaque em procedimentos cirúrgicos (73,1%) e com realização de exames laboratoriais (90,4%). Para o tratamento farmacológico prevaleceu o uso: hidralazina 20mg (78,4%); sulfato de magnésio 50% (70,8%); e outros (80,4%). Conclusão: os resultados revelam que a morbimortalidade materna e perinatal é evidenciada como um grande problema de saúde pública. Descriptores: Epidemiologia; Síndrome HELLP; Obstetrícia.
High systemic arterial pressure (SAP) during the gestational period is considered a disease of high superiority and denotes a relevant consequence for maternal-infant morbidity and mortality. Among the various obstetric complications observed during gestation, the Pregnancy-Induced Hypertensive Syndrome (PIHS) have been evidenced worldwide preferentially in underdeveloped and developing countries because it is a major obstacle to a healthy gestation, which contributes to the statistical increase of maternal and perinatal infections. PIHS is classified as chronic hypertension, preeclampsia/eclampsia, and HELLP syndrome (HS), its most pronounced manifestation.

In 1982, Louis Weinstein first reported this intense complication, observing 29 women diagnosed with preeclampsia, who developed thrombocytopenia, intravascular hemolysis detected by findings in the peripheral blood smear and changes in the liver function tests. Through this study, the researcher proposed distinguishing women inserted in this laboratory condition from those diagnosed as severe preeclampsia. This disease, with serious consequences for the mother and the unborn child, was named HELLP syndrome, an acronym of the three criteria established for its presence (H = hemolysis EL = elevated liver enzymes; LP = low platelet). The symptomatology of HS is most often lacking, allowing discovering malaise, epigastric pain, nausea and headache; thus the intensity of clinical distrust HS cases is of great importance. In the presence of thrombocytopenia in a pregnant, parturient or puerperal patient with preeclampsia, one must accurately reflect HELLP syndrome.

Approximately 20% of pregnant women diagnosed with severe preeclampsia present HS. This syndrome is characterized as unique because of its diagnosis through specific laboratory tests. The timely diagnosis is seen as promising to abstain from distension, rupture, hepatic bleeding, and the emergence of disseminated intravascular coagulation. If these aspects arise before delivery, the pregnant woman and the unborn child compete for consecutive illness or death.

According to the protocol of the Ministry of Health, pregnant women with preeclampsia should perform laboratory tests for triage: complete blood count with platelets, urinalysis, serum creatinine, lactic dehydrogenase (LDH), uric acid, bilirubin, and transaminases; other modalities of higher specificity tests are directed to patients with a platelet count below 100,000/ml.

The inclusion of HS in the effective analysis of preeclampsia/eclampsia increases its morbidity and mortality. The deaths associated with this clinical opinion indicate that they occur about 1 to 24%. Maternal mortality information by HS numerically is quite high when the care of these patients occurs in tertiary hospitals. HELP syndrome is observed in 1/1000 pregnant women, generally affecting pregnant women in the third month of gestation. The prognosis announces its severity, exhibiting perinatal mortality of approximately 10 to 60%, and maternal in 1.5 to 5% of the cases.

The HELLP syndrome, which closely relates to preeclampsia, occurs in 1/1000 pregnant women, causing pregnant women to become ill in the third trimester. The diagnostic evaluation shows its austerity, with perinatal mortality close to 10 to 60%, and maternal in 1.5 to 5% of the situations. It presents low numerical statistics before the 27th week of gestation, being common its manifestation around 30% of the times during the puerperium. Heterozygous women for Leiden's Factor V are more prone to this severe obstetric complication.

The HELLP syndrome, to date, does not have a specific treatment, due to the little knowledge on the pathophysiology of the disease. Different experimental modalities were adopted to treat or reverse the pathophysiology of HS. Although few controlled clinical trials have been conducted to ascertain the effectiveness of the interventions, there are no recommendations for treatment in daily clinical practice. Delivery and the removal of the chorionic villi are adopted as definitive treatment of HELLP Syndrome.

**OBJECTIVE**

- To describe the obstetric profile and types of treatment of women with HELLP syndrome.

**METHOD**

Article extracted from the specialization monograph << Socio-epidemiological profile of women admitted with HELLP Syndrome at a public maternity of Piauí >>, presented to the Multiple Higher Education College-IESM as a partial requirement to obtain the title of Specialist in Obstetric Nursing.

Documentary, descriptive and retrospective study, with qualitative approach, which used records of women identified with HELLP.
Syndrome under treatment at the public maternity reference for the state of Piauí (TE), Brazil. The study population consisted of all medical records of women diagnosed with HELLP syndrome admitted from January 1, 2008 to December 31, 2012.

The research had, as inclusion criterion, information from the medical records of women diagnosed with HELLP syndrome admitted to the Maternal Intensive Care Unit of the aforementioned maternity in the period from 2008 to 2012. Fifteen records indicated in the registry book were excluded from the data collection, but not located in the file.

In order to obtain the population of the study, a registry of 67 women with HELLP Syndrome was carried out in the mentioned period. Of this total, only 52 records were found in the file, thus constituting the study population.

The data were obtained through a form with questions related to pharmacological, surgical and examinations; data on parity, type of delivery and deaths were also included. The data collection took place in August and September of 2013 in the archive section of the institution.

A quantitative analysis of the data was performed by the SPSS program version 20.0. The data were arranged in tables (absolute frequency and percentage) and discussed with the literature.

The research obeyed the ethical precepts and was approved by the Ethics and Research Committee of the State University of Piauí/UESPI, with the CAAE: 19629613.5.0000.5209.

### RESULTS

Table 1 shows that the most used medications were hydralazine (78.4%), magnesium sulfate 50% (70.6%), dexamethasone 2mg or celestone 4mg (43.1%), methyldopa 500mg (31.4%) and nifedipine and diazepam (17.9%) and 45.1% of hemotherapy. Regarding the type of treatment, 26.9% underwent a surgical procedure and 90.4% underwent laboratory tests.

Table 2 showed that regarding parity: 48.1% were primiparous and 51.9%, multiparous, whereas the cesarean section was the most evidenced (78.8%) when compared to the vaginal route (13.5%). Regarding the deaths, 13.5% were maternal death and 11.5%, fetal death.
Table 2. Distribution of women admitted with HELLP Syndrome according to parity, type of delivery and deaths. Piauí (PI), Brazil, 2013.

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
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<tr>
<td>Parity</td>
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<td></td>
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<tr>
<td>Primiparous</td>
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<td>48.1</td>
</tr>
<tr>
<td>Multiparous</td>
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<td>51.9</td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
</tr>
<tr>
<td>Type of delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaginal route</td>
<td>7</td>
<td>13.5</td>
</tr>
<tr>
<td>Cesarean</td>
<td>41</td>
<td>78.8</td>
</tr>
<tr>
<td>Ignored</td>
<td>4</td>
<td>7.7</td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
</tr>
<tr>
<td>Deaths</td>
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<td></td>
</tr>
<tr>
<td>Mother</td>
<td>7</td>
<td>13.5</td>
</tr>
<tr>
<td>Fetus</td>
<td>6</td>
<td>11.5</td>
</tr>
</tbody>
</table>

DISCUSSION

The most common procedure in women diagnosed with HS aims to prevent maternal death and bases on the discontinuation of gestation, after which the thrombocytopenia and the deficit in coagulation factors were evaluated and analyzed, both identified as the main factors responsible for maternal death. 11

The procedure prior to the interruption of gestation according to the Ministry of Health follows the following protocol: preoperative evaluation of the blood crust; transfusion of platelets and coagulation factors in the period of interruption by cesarean delivery; antihypertensive: preference for hydralazine (5 – 40 mg); magnesium sulfate; venous hydration under monitoring and rigorous control of diuresis. 1

The manual of obstetrical procedures of the maternity Dona Evangelina Rosa, drawn up in 2013, discusses that the treatment of choice for HS is similar to the one indicated for preeclampsia and eclampsia, adopting the following general measures: keeping the patient in quiet, silent, low-light conditions; keeping airways free (high headboard), lateralized head; moist O2, five liters, per nasal catheter or mask; Guedel cannula; catheterization; calibrated vein puncture and anticonvulsant therapy (magnesium sulfate), antihypertensive therapy (nifedipine, hydralazine, etc.), assessment of fetal vitality, and laboratory evaluation. 12

World-wide studies on HS have questioned that there is an essential progression of thrombocytopenia and a decrease in liver enzymes and LDH with dexamethasone, although there is little evidence that this therapy has reduced maternal death. 13

In a study conducted by the University of Mississippi, the authors observed a significant decrease in morbidity due to the reduced need for administration of antihypertensive and transfusions, faster recovery in postpartum, in parturients or postpartum women with HS in the last decade, when the use of high doses of corticosteroids has become a therapeutic routine. 14

As in most severe toxemia cases, women with HS will routinely receive prophylaxis with magnesium sulfate. In the studied maternity, the Zuspan regimen consists of an attack dose of 4 g and maintenance with 1-2 g/h intravenously, which must be ensured for 24 hours postpartum. Not less important is the use of antihypertensive to maintain blood pressure below 160 X 105mmHg, which can be achieved with 5 mg of hydralazine every 15-20 minutes up to the maximum dose of 20 mg/h. Second-choice antihypertensive include labetalol and nifedipine. 15

The multiparity also occurred in a study carried out in Teresina at a reference public maternity, with 372 women diagnosed with preeclampsia, with files in the period 2011 to 2012, an average of 2.5 live births per woman, corroborating the findings of the present study. 16

The present study presents variables similar to a survey conducted at the Obstetrics and Gynecology Service of the Barros Luco-Trudeau Hospital with women who had spontaneous hepatic rupture in HELLP Syndrome, in which 80% of the participants were multiparous. 17 Some studies on this theme have reported that Pregnancy-Induced Hypertensive Syndromes are more evident in nulliparous, whose risk is three to six times higher when compared to multiparous women. 18

Childbirth in women with HS relates to immeasurable complications, such as postpartum hemorrhage, infection, vaginal and abdominal wall hematoma. The determination of the way of delivery associates with conditions of the cervix, gestational age and fetal vigor. For Sibai (2004), abdominal delivery is advisable for all non-laboring pregnant women, with a Bishop index <5 and gestational age <30 weeks. 15, 8
Variables similar to this study were detected by a study carried out at the Mother and Child Institute Professor Fernando Figueira (IMIP) in Recife, Northeastern Region of Brazil, with information obtained from November 2006 to September 2007 of women diagnosed with severe preeclampsia, which found 64.9% of primiparous women, normal birth in 20.1% of women, while 79.9% performed cesarean delivery; 56.7% for maternal indication and 43.3% for fetal indication. 

In a study carried out on maternal death at a referral maternity in the state of Ceará in 2009, with retroactive data from 2000 to 2008, the authors investigated that most maternal deaths that occurred in the mentioned period associated with Pregnancy-Induced Hypertensive Syndromes represented by preeclampsia, eclampsia and HELLP syndrome, a situation also present in this study. 

In a secondary analysis of the clinical and laboratory profile of a sample of 105 women from a randomized clinical trial in the Obstetrical Intensive Care Unit (ICU) of the Mother and Child Institute Professor Fernando Figueira (IMIP) in Recife, Pernambuco, with data from 2005 to 2006, the researchers detected four cases of death, corresponding to 4.8% of admissions by HS, corroborating the findings of this current study. 

CONCLUSION

Most women with HS were primarily medicated with hydralazine 20mg; magnesium sulphate 50%; dexamethasone 2mg or celestone 4mg and blood transfusion, did not undergo surgical procedure and more than 90% underwent laboratory tests. Most women were multiparous, had an indication of cesarean delivery, and the number of maternal and fetal deaths are numerically well evidenced.

The results obtained in this study confirm information contained in the literature on this theme that qualifies the HELLP Syndrome as one of the Pregnancy-Induced Hypertensive Syndromes, which evidences increasing morbidity and mortality. Pregnant women and postpartum women with clinical manifestations and/or signs suggestive of this obstetric complication require intensive care and special procedures, alerting health professionals to the meticulousness of the drug therapy and the accomplishment of a laboratorial examination as early as possible.

REFERENCES


10. Ministério da Saúde (BR), Conselho Nacional de Saúde. Resolução nº 466 do Conselho Nacional de saúde de 12 de

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