Risk Factors and Prognosis of Ruptured Ectopic Pregnancy in University Hospital of Benin

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Abstract

Aim: The aim was to study the risk factors and prognosis of ruptured ectopic pregnancy.

Method: We conducted a retrospective and descriptive study about ruptured ectopic pregnancy at the university clinic of gynecology and obstetric, over a period of 05 years (01/01/2009 to 31/12/2013). Data collection was done by a count of records using a questionnaire developed for this purpose. A total of 336 cases were recorded and analyzed by EPI Data Version 3.1.

Results: The overall incidence of ectopic pregnancy was 1.89% and 88.69% of cases were ruptured. The average age was 28 years. The most affected age group was between 20 and 29 years. They were mainly married women (43.62%), nulliparous and pauciparous (53.36%). The most contributing risk factor was history of genital infections (45.31%). 81.54% of patients were referred from a peripheral center. The highest number of ruptured ectopic pregnancy occurred between 7 and 10 weeks of gestation (39.6%). 92.95% of patients underwent radical surgery with total salpingectomy. 56.71% among the latter underwent per operative auto transfusion. The prognosis was marked by one death (0.4%).

Conclusion: Ruptured ectopic pregnancy is one of the causes of morbidity and maternal death.

Introduction

Ectopic pregnancy is a public health issue all over the world, whatever the developmental status [1]. Its incidence varies between 1 to 2% of pregnancies [2]. Because of the recrudescence of sexually transmitted infections and smoking, this incidence has doubled even tripled from 1970 to 1990 in industrial countries [3]. In Europe these last years, the prognosis of ectopic pregnancy has subsequently improved due to diagnosis and therapeutic progress that have permitted reduction and even eradication of hemorraghing accident from tubal rupture.

On the other hand, in developing countries, the frequency of ruptured ectopic pregnancy is still elevated and represents still the first cause of maternal mortality in the first trimester compromising further fertility [4,5,6]. This is related to late diagnosis, because in Africa women wait until three months amenorrhea to start antenatal care. In Benin in 2006, the frequency of ectopic pregnancy at the University clinic of gynecology and obstetric was 2.89% that is to say 1 case for 34 deliveries [7]. The impact of ectopic pregnancy on the maternal mortality during the first trimester is to be considered, since reaching 10% of the total maternal mortality [8]. According to PANEL L and DECHAUD H [3]. The ectopic pregnancy is life threatening: it represents 13% of maternal related death during the first trimester. For ROUTEVILLE C. and al [9], a woman having an ectopic pregnancy has a relative mortality risk 10 times higher than the one during delivery.

The aim of our study was to identify the risk factors and the prognosis of ruptured ectopic pregnancy at the University Clinic of gynecology and obstetric. All patients received for ruptured ectopic pregnancy at the Emergency unit and treated at the University Clinic of gynecology and obstetric were included. The study has been conducted using the non-probability sampling method of commodity. Indeed, all patients' files filling the selection criteria have been admitted in our study. The receptions records, of the Emergency care unit, orientation and of the operating room, files of patients selected, and the data processing form were made up of our means of data gathering. A pre-test was done on ten files, which helped us to correct the data processing form. We used these various records to list the patients' files number filling the criteria. We then consulted the files at the University Clinic archives then analyzed to make an inventory of those that were complete. On a total of 336 files listed, 298 were included. The data collected on the data processing form were keyboarded and processed with the software EPIDATA. The confidentiality was respected and the anonymity of information's relatives to each patient. The major difficulty was the absence of functional prognosis appreciation because many patients have been lost from sight.

Results

The frequency of ectopic pregnancy was 1.89% of the first trimester emergencies that is to say 1 case of ectopic pregnancy for 53 obstetrical emergencies. Among the 336 cases of ectopic pregnancies, the ruptured ectopic pregnancies accounted for 88.69% (298/336). During those 5 years, the progress of ruptured ectopic pregnancy was: 87.69% in 2009, 83.33% in 2010, 92.31% in 2011, 91.94% in 2012 and 87.69% in 2013.

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This observation is also made by almost all the authors who estimate [10] from 1993 to 1994 in a study made at the University clinic of maternity. Pauciparous were the majority 32.55%. PERRIN R. and al [10] is due to intense genital activity during that period and to desire for The ectopic pregnancy is therefore observed in young women and this [10] who found a dominant slice from 21 to 30 years old (61.27%).

Discussion

In our series, the dominant age bracket was from 20 to 29 years old (57.64%). This age bracket is similar to the one reported by RATINAHIRANA S. and al [8] and more than the one of DIALLO F. B. and al [18] who found 3.28%. This difference can be explain by the behavioral change of young women in front of the notable amelioration of reproductive health with access to informations and advises. The history of genital infection in our study was 42.95%. PURCAND A. [14] had found 23%. Genital infections represent a major risk factor in ectopic pregnancy. They act on the uterine tubes peristaltic quality by making tissues inflammatory and the cilia less mobile. The most important number of ectopic pregnancy is ruptured between 7 and 10 weeks amenorrhea with a percentage of 39.60% (n=118). The extremes being between 3weeks and 19 weeks of amenorrhea. The dominant blood group and rhesus factors was O+ with 46.33% followed by A+ and B+ accounting respectively for 23.16% and 16.84%. The time limit of management was within the first two hours following admission for 36.58% and in a time limit of more than two hours in 42.28%. All patients had a laparotomy. The total salpingectomy was done in 88.25% (n=263) of the overall patients; Ovariectomy in 4.03% (n=12) and hysterectomy in 0.67% (n=2). In our sample, 81.54% of patients were referred by peripheral centers. The patients’ dominant complaint was abdominal and pelvic pain with a percentage of 82.55%. Metrorrhagia was observed in 20.13% of patients. The most important number of ectopic pregnancy was ruptured between 7 and 10 weeks amenorrhea with a percentage of 39.60% (n=118). The extremes being between 3weeks and 19 weeks of amenorrhea. The dominant blood group and rhesus factors was O+ with 46.33% followed by A+ and B+ accounting respectively for 23.16% and 16.84%. The time limit of management was within the first two hours following admission for 36.58% and in a time limit of more than two hours in 42.28%. All patients had a laparotomy. The total salpingectomy was done in 88.25% (n=263) of the overall patients; Ovariectomy in 4.03% (n=12) and hysterectomy in 0.67% (n=2); conservative surgery in 7.05% (n=21). Haemoperitoneum was observed in all cases (Table 2). The tubal location was the most frequent (97.32%) with ampullar predominance in 56.71% of cases. Blood transfusion was done in 66.78% (n=199) of patients among which 56.71% had per operative autotransfusion by blood collection using Tanguieta funnel. The post operative complications were registered especially decompensate anemia 9.73% (n=29) and endometritis 3.69% (n=11). After surgical management 10.74% (n=32) did not have proper quality tubes and were orientated to AMP, one case of maternal death, (0.34%) was registered. On 262 patients reviewed remotely from the operation, 94.32% (n=247) had had a pregnancy after the ectopic pregnancy. The time require for conception varied from 2months to 20 months after treatment of the ruptured ectopic pregnancy. Among these patients, 4 cases of relapse were noted.

Table 1: Repartition of patiences by gestitious.

<table>
<thead>
<tr>
<th>Gestity</th>
<th>Effective</th>
<th>Frequency in %</th>
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</thead>
<tbody>
<tr>
<td>Primigestious (1)</td>
<td>52</td>
<td>17.45</td>
</tr>
<tr>
<td>Paucigestious (2-3)</td>
<td>137</td>
<td>45.97</td>
</tr>
<tr>
<td>Multigestious (4-5)</td>
<td>102</td>
<td>34.23</td>
</tr>
<tr>
<td>Bignumegestious(&gt;6)</td>
<td>7</td>
<td>2.35</td>
</tr>
<tr>
<td>Total</td>
<td>298</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 2: Repartition of patiences by the quantity of haemoperitoneum.

<table>
<thead>
<tr>
<th>Blood quantity</th>
<th>Effective</th>
<th>Frequency in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 500</td>
<td>75</td>
<td>25.17</td>
</tr>
<tr>
<td>[500 - 1000]</td>
<td>81</td>
<td>27.18</td>
</tr>
<tr>
<td>[1000 - 1500]</td>
<td>76</td>
<td>25.50</td>
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<tr>
<td>[1500 - 2000]</td>
<td>38</td>
<td>12.75</td>
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<tr>
<td>[2000 - 2500]</td>
<td>17</td>
<td>5.70</td>
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<tr>
<td>[2500 - 3000]</td>
<td>4</td>
<td>1.34</td>
</tr>
<tr>
<td>≥ 3000</td>
<td>7</td>
<td>2.35</td>
</tr>
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Discussion

In our series, the dominant age bracket was from 20 to 29 years old (57.64%). This age bracket is similar to the one of PERRIN AND al [10] who found a dominant slice from 21 to 30 years old (61.27%). The ectopic pregnancy is therefore observed in young women and this is due to intense genital activity during that period and to desire for maternity. Pauciparous were the majority 32.55%. PERRIN R and al [10] from 1993 to 1994 in a study made at the University clinic of gynecology and obstetrics found that all women can be involved, but with a slight predominance of patients having had 1 or 2 pregnancies. This observation is also made by almost all the authors who estimate that ectopic pregnancy is associated to low parity [11,12]. We had collected 10.4% of cases with history of induced abortion. This rate is comparable with the one reported by RATINAHIRANA S. and al 8% [8] and more than the one of DIALLO F. B. and al [18] who found 3.28%. This difference can be explain by the behavioral change of young women in front of the notable amelioration of reproductive health with access to informations and advises. The history of genital infection in our study was 42.95%. PURCAND A. [14] had found 23%. Genital infections represent a major risk factor in ectopic pregnancy. They act on the uterine tubes peristaltic quality by making tissues inflammatory and the cilia less mobile. The most important number of ectopic pregnancy is ruptured between 7 and 10 weeks amenorrhea with a percentage of 39.60% (n=118). The extremes being between 3weeks and 19 weeks of amenorrhea. The dominant blood group and rhesus factors was O+ with 46.33% followed by A+ and B+ accounting respectively for 23.16% and 16.84%. The time limit of management was within the first two hours following admission for 36.58% and in a time limit of more than two hours in 42.28%. All patients had a laparotomy. The total salpingectomy was done in 88.25% (n=263) of the overall patients; Ovariectomy in 4.03% (n=12) and hysterectomy in 0.67% (n=2); conservative surgery in 7.05% (n=21). Haemoperitoneum was observed in all cases (Table 2). The tubal location was the most frequent (97.32%) with ampullar predominance in 56.71% of cases. Blood transfusion was done in 66.78% (n=199) of patients among which 56.71% had per operative autotransfusion by blood collection using Tanguieta funnel. The post operative complications were registered especially decompensate anemia 9.73% (n=29) and endometritis 3.69% (n=11). After surgical management 10.74% (n=32) did not have proper quality tubes and were orientated to AMP, one case of maternal death, (0.34%) was registered. On 262 patients reviewed remotely from the operation, 94.32% (n=247) had had a pregnancy after the ectopic pregnancy. The time require for conception varied from 2months to 20 months after treatment of the ruptured ectopic pregnancy. Among these patients, 4 cases of relapse were noted.

Conclusion

The ectopic pregnancy remains a public health issue. The risk factors mostly found are history of genital infection, adhesive bands secondary to pelvic surgery. Autotransfusion improves maternal prognosis.
Recommendation

To reduce the frequency of ruptured ectopic pregnancy and improve functional and vital prognosis in developing countries and in Benin particularly, we need early women consultation in cases of amenorrhea or suspected pregnancy to determine its location by a qualified health agent. Health agents must render good follow up of patients bearing genital infections.

Competing Interests

The authors declare that they have no competing interests.

References


