

Ruptured Ectopic Pregnancy: Epidemiology and Management in the General Surgery Department of the Ignace Deen National Hospital, Conakry University Hospital

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Abstract

Introduction: The aim of this study was to contribute to improving the quality of GEUR management in the general surgery department and in the maternity ward of the Ignace Deen national hospital, Conakry University Hospital. **Methodology:** This was a retrospective, descriptive study lasting two years (January 1, 2020 to December 31, 2022), carried out in the general surgery and gynecology-obstetrics departments of the Ignace Deen national hospital, Conakry University Hospital. We included all patients with a ruptured ectopic pregnancy who received surgical treatment during the study period. **Results:** We collected 13,524 cases of surgical interventions in the two services, among them, we recorded 89 cases or 0.66% GEUR. The average age of the patients was 24.26 years. Brides were the most represented with 80.96% of cases. Women practicing a liberal profession were 51.69% (n = 46) and housewives 26.97% (n = 24). Clinically, amenorrhea was noted in all patients, *i.e.* 100%, abdominal-pelvic pain in 95.2% (n = 85) of cases, metrorrhagia in 94.08% (n = 84), abdominal-pelvic sensitivity in 97.44% (n = 87) of cases and anemia in 85.39% of cases. The GEUR was ampullary in 69.66% (n = 62) cases. Salpingectomy was performed in 90.72% (n = 81). The surgical outcomes were satisfactory in 98.87% (n = 88) of cases. We recorded one case of surgical site infection. We have not recorded any deaths. The average length of hospitalization was 4 days. **Conclusion:** GEUR is relatively high in our context. A good understanding of the prognostic factors of GEUR, awareness and family planning could reduce GEUR.

Keywords

Ruptured Ectopic Pregnancy, Epidemiology and Management

1. Introduction

Ectopic pregnancy (EUG) corresponds to the implantation and development of the egg outside the uterine cavity [1]. Its rupture (ruptured ectopic pregnancy or GEUR) is a surgical emergency causing abdominal-pelvic pain associated with metrorrhagia or bleeding from the endocervix and amenorrhea dating back several weeks which can lead to formidable and serious complications, putting the patient's vital prognosis at risk [2]. Its incidence varies between 1% to 2% of pregnancies. GEU constitutes a serious pathology because it still represents the leading cause of mortality in the first trimester of pregnancy and it significantly compromises subsequent fertility [3].

The objective of this study was to contribute to improving the quality of GEUR management at the Ignace Deen national hospital in Conakry.

2. Methodology

This was a retrospective, descriptive study lasting two years (January 1, 2020 to December 31, 2022), carried out in the general surgery and gynecology-obstetrics departments of the Ignace Deen national hospital, Conakry University Hospital. We included all patients with a ruptured ectopic pregnancy who received surgical treatment during the study period. The variables were clinical, therapeutic and evolutionary.

The collected data were entered, corrected and analyzed using Epi Info version 7 software, then transferred to Excel 2010.

3. Results

During the study period, we collected 13,524 cases of surgical interventions in the two services, among them, we recorded 89 cases or 0.66% GEUR. The average age of the patients was 24.26 years with a range of 19 and 40 years. Brides were the most represented with 80.96% of cases. Women practicing a liberal profession represented 51.69% (n = 46) and housewives 26.97% (n = 24). We recorded 38.20% (n = 34) out-of-school patients.

Multigestures represented 62.92% (n = 56) (see **Table 1**). History dominated by gynecological infections, *i.e.* 79.52% (n = 71) (see **Table 2**).

Clinically, amenorrhea was noted in all patients, *i.e.* 100%, abdominal-pelvic pain in 95.2% (n = 85) of cases, metrorrhagia in 94.08% (n = 84), abdominal-pelvic sensitivity in 97.44% (n = 87) of cases and anemia in 85.39% of cases (see **Table 3**).

Additional examinations were dominated by abdominal ultrasound, blood count and pregnancy test in all cases, *i.e.* 100%. The treatment time was less than

Table 1. Distribution of patients according to gestation.

Gesture	Effective	Percentage
Multi gesture	56	62.92
Pauci gesture	21	23.60
First gesture	12	13.48
Total	89	100

Table 2. Frequency of gynecological history and abdominopelvic surgery.

Antecedent	Effective	Percentage
Genital infection	71	79.52
Abortion	10	11.2
Contraceptions (IUD, Oral)	9	10.08
Caesarean section	4	4.48
Appendicitis	2	2.24
GEU	1	1.12

Table 3. Frequency of clinical signs.

Clinical signs	Effective	Percentage
Functional signs		
Pelvic pain	85	95.2
Metrorrhagia	84	94.08
Amenorrhoea	89	100
Nausea	20	22.4
Vomiting	23	25.76
Dizziness	61	68.32
Asthenia	49	54.88
Physical signs		
Abdominal and pelvic tenderness	87	97.44
Abdominal defense	58	85.12
Painful Douglas	76	64.96
Umbilical cry	48	53.76
Breast tension	27	30.24
General signs		
Pallor	43	48.16
Hypotension	22	24.64
State of shoc	20	22.6
Tachycardia	17	19.21

6 hours in 98.88% (n = 85). The GEUR on the right side in 52%. It was ampullary in 69.66% (n = 62) cases and isthmic in 11.24% (n = 10) of cases (see **Table 4**).

Table 4. Distribution of patients according to anatomical site.

Anatomical seat	Effective	Percentage
Ampullary	62	69.66
Isthmian	10	11.24
Interstitial	7	7.87
Infundibular	4	4.49
Ovarian	6	6.74
Total	89	100

A salpingectomy was performed in 90.72% (n = 81) patients, an oophorectomy in 6.72% (n = 6) of cases and an adnexectomy in 2.24% (n = 2). The surgical outcomes were satisfactory in 98.87% (n = 88) of cases. We recorded one case of surgical site infection. We did not record any deaths during the study period. The average length of hospitalization was 4 days with extremes of 3 and 20 days.

4. Discussion

The low hospital attendance rate, incomplete information, poor archiving of files, limitation of clinical and paraclinical examinations as well as the retrospective nature constituted our main difficulties and limitations. GEUR is a frequent and serious condition in the surgical departments and maternity ward of the Ignace Deen National Hospital. It varies around the world from one country to another depending on the studies.

During the study period, we recorded a significant frequency of GEURs. Our results were in line with studies reported in the literature [4] [5]. Our data could be explained on the one hand by the fact that our study was carried out in two departments (general surgery and gynecological-obstetrics) and on the other hand the high rate of gynecological infections linked to polygamy.

The high frequency of GEUR among young people in our context could be justified by the fact that the demographic profile here is that of a country with a very young population.

Patients working in the liberal professions were the most represented. The same observation was made by Randriambololona DMA *et al.* [3] in Madagascar who reported 42.60% of liberal professions. This increase could be explained by patients' ignorance or neglect of basic hygiene rules and the failure to treat genital infections early and effectively.

It appears from this study that married women were the most represented.

This seems to indicate that married women are as much, if not more, exposed than other women, but also by the desire to conceive pushed by these women. The high frequency of out-of-school women in our study is justified by a high number of housewives, of low socio-economic level, and more exposed to GEUR risk factors, particularly STIs.

The reason for consultation in our series was: amenorrhea, pelvic pain, me-

trorrhagia and dizziness. The existence of amenorrhea, abdominopelvic pain and metrorrhagia indicates an abnormal course of the pregnancy [6]. The same observation was made by Mahi *et al.* [7] in Morocco, who noted that the reason for consultation was amenorrhea (100%), abdominal-pelvic pain (98.3%) and metrorrhagia (31.3%).

Antecedents found during our study were similar to those reported by Cheikh A. *et coll.* [8]. The physical signs were dominated by abdominopelvic sensitivity, abdominal guarding and a bulging and painful Douglas. These signs are also of excellent predictive value for the diagnosis of ruptured GEU. And reflect the late stage at which the diagnosis was made and contribute to burdensome care and poorer prognosis without early and adequate care. The patients admitted in a state of shock all benefited from medical resuscitation before, during and or after the emergency surgical intervention. In industrialized countries, the hemodynamic state of patients at the time of diagnosis is most often satisfactory because most GEUs were diagnosed before tubal rupture [9]. The routine measurement of β -hCG made it possible to confirm with certainty the presence of a pregnancy. It is secreted early into the maternal blood from the cytotrophoblast, its level doubles every 2 days during the first month, in a normal pregnancy and reaches a maximum value between 8 and 10 weeks of pregnancy then decreases [10]. All operated patients had hemoperitoneum ≤ 500 ml, life-threatening bleeding requiring blood transfusion. Our result was superimposable to that of Monnier P and Barberino who found that the majority of patients presented a hemoperitoneum equal to or less than 500 ml [11]. In our study, tubal localization was the most frequent, then ovarian. Salpingectomy by laparotomy was proposed for the treatment of tubal pregnancy in the 1880s (28). Salpingectomy was performed in most of our patients. This observation corroborates that of other African authors [5]. The postoperative course was generally satisfactory, but we recorded one case of surgical site infection. We have not recorded any deaths.

5. Conclusion

GEURs are frequent and serious medical-surgical emergencies. It appears from our study that the frequency of GEURs is relatively high and is the prerogative of young subjects. Genital infections are the most common etiologies and treatment remains exclusively surgical, associated with adequate antibiotic therapy. A good understanding of the prognostic factors of GEUR, awareness and family planning could reduce GEUR.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Cabar, F., Fettback, P.B., Pereira, P.P. and Zugaib, M. (2008) Serum Markers in the

- Diagnosis of Tubal Pregnancy. *Clinics*, **63**, 701-708.
<https://doi.org/10.1590/S1807-59322008000500021>
- [2] Gervaise, A. and Fernandez, H. (2010) Therapeutic Management of Ectopic Pregnancies. *Journal of Gynecology Obstetrics and Reproductive Biology*, **339**, 17-24.
<https://doi.org/10.1016/j.jgyn.2010.02.013>
- [3] Randriambololona, D.M., Anjaharisoaniaina, N.T., Harioly, M.O., Rekoronirina, E.B., Randriambelomanana, J.A. and Andrianampanalarivo, H.R. (2012) Management of Ectopic Pregnancy at the University Hospital of Gynecology and Obstetrics of Befelatanana Antananarivo Madagascar. *Journal of Anesthesia-Resuscitation and Emergency Medicine*, **41**, 16-19.
- [4] Job-Spira, N., Coste, J., Aublet-Cuvelier, B., Germain, E., Fernandez, H., Bouyer, J., and Pouly, J.L. (1995) Frequency of Ectopic Pregnancy and Characteristics of Treated Women: First Results from the Auvergne register. *The Medical Press*, **7**, 351-355.
- [5] Rim, B.H., Sami, M., Maech, M., et al. (2006) Management of Ectopic Pregnancy. About 77 Cases. *Tunisia Medical*, **4**, 238-241.
- [6] Falconnier, A.M. (2003) Ectopic Pregnancy: Interest and Value of Clinical Examination in the Management Strategy. *The European Journal of Obstetrics & Gynecology and Reproductive Biology*, **32**, 18-27.
- [7] Cepni, I., Ocal, P., Erkan, S. and Erzik, B. (2004) Conservative Treatment of Cervical Ectopic Pregnancy with Transvaginal Ultrasound-Guided Aspiration and Single-Dose methotrexate. *Fertile Sterile*, **81**, 1130-1132.
<https://doi.org/10.1016/j.fertnstert.2003.09.052>
- [8] Cheikh, A., Tidiane, C., Bernis, L., El Hadj, O.F., and Diadhiou, F. (2002) Ectopic Pregnancy in Senegal. *Cahiers d'études et de recherche francophones*, **8**, 271-274.
- [9] Iqraoun, S. (2016) Ectopic Pregnancy: Epidemiology, Diagnosis, Treatment at the Gyneco-Obstetrics Department "I" (About 161 Cases). Doctor's Thesis, 34.
- [10] Monnier-Barbarino, P. (2003) Ectopic Pregnancy: Contribution of Paraclinical Examinations Excluding Ultrasound. *The European Journal of Obstetrics & Gynecology and Reproductive Biology*, **32**, 39-53.
- [11] Philippe, E. and Charpin, C. (2015) Gynecological and Obstetrical Pathology. *Human Reproduction*, **30**, 987-993.