

## Case Report

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## Unruptured Ectopic Pregnancy, Limitations in Diagnosis, Management and Post-Treatment Follow-up: Case Followed at Kasenga General Hospital in Uvira / Eastern Democratic Republic of Congo

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### ABSTRACT

Ectopic pregnancy is an implantation of a fertilized egg outside the uterine cavity. It is a public health problem especially in developing countries. It is a pathology that faces many challenges in these countries, especially in its diagnosis, its management and its follow-up. All these challenges associated with a late consultation exposes the risk of discovery of a serious form and thus jeopardizes the vital prognosis of the pregnant woman. We report in this work, the difficulties in the diagnosis, in the management, in the follow-up as well as the major risk factors, of a case followed in the city of Uvira within the General Hospital of Kasenga. The main limits encountered are: difficulty in the diagnosis due to the lack of a less complete technical platform and low economic means of our population, the technique of taking remains optimal whatever the procedure used, the post-treatment follow-up still causes a challenge given the plateau technical, non-collaboration of the patient; infections remain permanent and constitute the main risk factor. These observations remain similar for all the other patients with ectopic pregnancy who come to our hospital for consultation. And therefore the sensitization of the population for an early consultation and the prevention of risk factors would be important. These data should also encourage the political and health authorities to provide this structure with an adequate technical platform for the diagnosis and monitoring of this deadly pathology.

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### Introduction

Hemorrhages occurring in the first trimester of pregnancy are frequent reasons for consultation in the obstetrics gynecology department. Among these causes are ectopic pregnancy [EUP], which corresponds to the implantation of the fertilized egg outside the uterine cavity, due to its complications including hemorrhage and the risk of infertility. It is a gynecological emergency [1, 2].

In a woman in genital activity, presenting a genital haemorrhage or pelvic pains it is necessary to quickly think of a GEU. It is always necessary to think of establishing a differential diagnosis because the clinic is polymorphic [1, 2].

A large number of studies have shown a prevalence that is still high, and this would be due to risk factors that remain permanent within the community, such as: the contraceptive, sexually transmitted infections (STIs), pathology and tubal surgery, in vitro fertilization, tobacco [1, 3-6]. It thus constitutes a public health problem in all countries of the world [2]. It is the leading cause of maternal mortality in the first trimester of pregnancy [7-11].

The identification of risk factors, the presence of biological examinations, in particular the determination of plasma beta-HCG and imaging, including ultrasound, especially by the endovaginal route, allow earlier diagnosis and subsequent treatment [1].

The management of unruptured EP aims to limit bleeding events and prevent recurrence of EP, as well as to preserve the fertility of women who wish to do so. Although surgery remains the main treatment option, medical treatment and therapeutic abstention have indications in the management of EP [1]. The obstetrical future of the woman who remains dependent on the condition of the pelvis and the contralateral fallopian tube in a social context where even secondary sterility constitutes a real drama.

### Observation

Mrs AB, living in the city of Uvira, 21 years old, G2P1E1, the date of her last period dates back to 28/12/2021, carries a pregnancy of 9 weeks of Amenorrhea (SA) according to the date of her Last Rules (DDR). Married in a monogamous household, selling her being with a civil servant husband. Brought in consultation here at the General Hospital (HG) of Kasenga for pelvic pain.

The anamnesis makes us discover that the patient had presented pelvic pain a month earlier, motivating them to do a pregnancy test which came out positive and she had decided to see the gynecologist of our structure who had decided to put her on an antispasmodic (spasfon) and folic acid. It should be noted that apart from the ultrasound done, the other balance sheets, in particular infectious, came back without particularity except for the qualitative assay of the beta-HCG level which came back positive.

The pregnant woman returned under a treatment mentioned above. Nevertheless, the patient reports a slight improvement in her symptoms for at least three weeks under this treatment.

The aggravation of these pelvic pains, especially accentuated in the Right Iliac Fossa, of moderate intensity, radiating towards the lumbar fossae, not relieved by antispasmodics, in the type of tugging, accompanied by vaginal bleeding in the form of spotting motivating the patient to come and consult in our structure for better care.

In addition to the anamnesis, we should just mention the presence of physical asthenia, vulvar pruritus for a few days.

It should be noted that in her history, she benefited from a caesarean section indicated for acute fetal distress, notion of urogenital infections followed by the gynecologist, no notion of contraception noted, the other antecedents were less contributory.

On physical examination, the patient was lucid, cooperative. The general state was altered by a more or less suffering facies. Her hemodynamics was stable with a heart rate of 68 beats per minute, blood pressure of 128/73 millimeters of mercury. The radial pulse was synchronous with the heartbeat. She was respiratory stable with a respiratory rate of 18 breaths per minute and an oxygen saturation of 97%.

The abdomen was of normal volume, a peritoneal incision visualized. Palpation revealed hypogastric tenderness, especially tenderness in the right iliac fossa.

At the gynecological-obstetrical examination, we objectified a vulva a little stained with blood, on vaginal examination, the cervix was closed and the finger cot came back more or less red stained with blood.

Faced with this table we thought of a probable Extra-Uterine Pregnancy and made a differential diagnosis with a threat of early abortion, excluding an associated urogenital infection.

No possibility to do the quantitative beta-HCG level assay here in our structure. It should be noted, however, that the pelvic and endovaginal ultrasound performed noted an empty uterus, a gestational sac at the ampulla of the right fallopian tube, without cardiac activity with a hematosalpinx less than 3mm and separation of the sac.

In view of these examinations, we retained the diagnosis of an unruptured ectopic pregnancy.

The management was made, with the patient's agreement, by methotrexate 50 milligrams in an infusion of 5% glycosed serum to be run for 24 hours to be repeated after 24 hours in a row, associated with an analgesic made of paracetamol two once a gram a day.

It should be noted that the methotrexate was covered with a cloth to reduce the effects of the sun's rays which could lead to the ionization of the product and thus reduce its effectiveness.

Ultrasound monitoring should be performed at a rate of twice a week for two weeks and once a month for 6 months.

On discharge, ultrasound control showed an empty uterus and the disappearance of the gestational sac.

There was no possibility of making the quantitative determination of the level of beta-HCG, given the lack of apparatus and reagents. The only possibility of carrying out this examination is to send the sample to the nearest towns, in particular to Bukavu or Bujumbura. Given the high cost of the test, the impassability of our roads, and the low socio-economic level of the population, this remains a challenge.

Nevertheless, the qualitative dosage of Urinary beta-HCG is feasible and it was negative after a few weeks of the patient's discharge from the hospital.

### Discussion

The management and follow-up of ectopic pregnancies remains a challenge. Before 2003, the incidence in developed countries was around 0.02% according to a study carried out during this period [12]. The few studies carried out in developing countries, notably in Sub-Saharan Africa, show an incidence varying between 0.5 and 3.5% [13-16].

In our hospital, we recorded 573 deliveries over a period of six months; and only eight cases of EP were recorded, which makes an incidence of 1.4%. Note that the rate found here is similar to those in the literature already reported in some other countries in sub-Saharan Africa.

Among the risk factors, our patient had only two factors; low parity and recurrence of genital infections. As some studies show, EP was linked to low parity [17, 18]. A study in Chad shows that 51.9% of patients were pauciparous [19]. And according to the literature, the two main factors of risk of EP in women without contraception were history of genital infection or tubal surgery and smoking [12, 19]. The combination of different risk factors is the basis of 76% of cases of EP [15].

Our patient presented on admission with the dominant signs of UEG, in particular amenorrhea, metrorrhagia and pelvic pain. As in other studies, 100% of patients have amenorrhea with or without the presence of pelvic pain and metrorrhagia [20, 21].

In addition we did a qualitative assay of urinary  $\beta$ -HCG levels by probed urine with the idea of immediately confirming the pregnancy but given the false positivity that would be possible, we also performed an ultra-sound to confirm the USG, as in other studies more than 70% of GEU cases or even 100% of GEU cases are confirmed by ultrasound [21, 22].

The localization of the EUG in our case was ampullary, as also shown by other studies explaining that the ampulla is the preferential site of a EUG [15, 23].

The delay in coming to consult constitutes a risk factor for the discovery of advanced forms and therefore worsens the vital prognosis and is the basis of the high frequency of ruptured or fissured GEUs [14, 20, 21]. In our case, the GEU was already fissured with a hematosalpinx about 3cm.

For the care, we made a medical and conservative treatment since all the indications of this treatment were present. We used methotrexate 50mg in infusion of 5% glucose serum to run for 24 hours to resume 24 hours three times in a row. In developed countries, medical treatment and conservative laparoscopic surgery are more commonly practiced and, in early forms, improve overall management and subsequent fertility [17]. Unlike in many developing countries, given the delay in consultation and the limited means of diagnosis, the majority of cases are subject to laparotomy associated with salpingotomy and/or salpingectomy [15, 16].

During radical treatment, monitoring with  $\beta$ -HCG is most often useless. And for conservative treatment, follow-up by assaying the level of  $\beta$ -HCG must be carried out in order to detect persistence of the trophoblast which justifies additional treatment with methotrexate [24]. In our case, we did a medical treatment with methotrexate, after a week of treatment, i.e. three doses, we did a qualitative control assay which came back negative with a risk of false negative, an ultrasound follow-up was offered to the patient but was not respected.

### Conclusion

Ectopic pregnancy [EP] remains a public health problem in our environment, which is explained by the growing increase in its frequency. The reorganization of the gynecology-obstetrics department within our structure is the basis for improving the quality of care in our environment as well as in the early management of this pathology.

The frequency of EP should be reduced in the following years and this would depend on how the risk factors are controlled and eradicated early.

The diagnosis of this pathology is often at the late stage, and complications involving immediate vital prognosis and later functional. The means of confirmation remain difficult to access for our population, the high cost and sometimes the unavailability of certain materials, such as the case for the quantitative determination of  $\beta$  HCG, at the level of our structure.

Performing an early ultrasound should promote more comprehensive screening at a stage of unruptured USG.

Medical treatment with methotrexate infusion of 5% glucose serum gives satisfactory results, especially if the criteria for medical treatment are met.

Post-treatment monitoring remains a huge challenge given the unavailability and means of hormonal control, the low economic level of the population and the impassability of our roads; in case we need to send the samples to the nearest towns.

Infectious risk factors, especially urogenital infections remain to be feared in the pathogenesis of EP in our population.

### Recommendations

#### To the Nursing Staff

- ✓ Ensure screening and correct management of urogenital infections and Sexually Transmitted Infections.
- ✓ Think about ectopic pregnancy, in front of amenorrhea.
- ✓ Establish medical treatment if the criteria are met and popularize laparoscopy if available.

#### To the Political and Health Authorities

- ✓ Equip Kasenga General Hospital with a laparoscopic surgery unit and ensure staff training.
- ✓ Equip the HG of Kasenga with diagnostic means, especially for the quantitative determination of the level of  $\beta$  HCG.

#### To the Population

- ✓ To avoid the misuse of antiseptics, self-medication and traditional treatment.
- ✓ To make consultation early as soon as there is amenorrhea or menstrual cycle disorders in order to avoid the woman, the emergency table with cataclysmic hemorrhages.

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