Case Report
International Journal of Basic and Clinical Studies (IJBCS)
2015; 4(1): 75-81, Tunc SY et al

Non-Communicating Rudimentary Horn Pregnancy: Two Case Analyses

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Abstract

Unicornuate uterus with rudimentary horn is among the rarest anomalies of the female genital system that emerges as a result of the underdevelopment of the Mullerian duct and brings forth, unless diagnosed and treated, risks of morbidity and mortality in gynaecological and obstetric terms. The present study defines two cases diagnosed with rudimentary horn pregnancy through ultrasonography and made subject to the excision of horn without rupture. Suspicion of the disease and use of ultrasonography play a key role in early and accurate diagnosis.

Keywords: Unicornuate uterus, rudimentary horn pregnancy, ultrasonography, excision.

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Introduction

Congenital anomalies of the Mullerian duct are observed in 0.1-3.8% of all women. Unicornuate uterus is the rarest of all Mullerian anomalies with an incidence of 4.4% and is considered to stem from a defect in the migration of one of the Mullerian ducts to a suitable location [1, 2].

Unicornuate uterine anomalies are divided into four sub-groups according to the classification designated by the American Fertility Society (AFS) (Figure 1) [3].

A1a. Communicating (endometrial cavity present)
A1b. Noncommunicating (endometrial cavity present)
A2. Horn without endometrial cavity
B. No rudimentary horn

Approximately 90% of unicornuate uteri appear together with non-communicating rudimentary horn. Implantation in rudimentary horn is observed together with a high level of pregnancy loss and tubal pregnancy. Most unicornuate uteri with rudimentary horn are non-communicating and do not involve functional endometrium, and are, therefore, asymptomatic. Early spontaneous miscarriages, ectopic pregnancy, abnormal presentations, intrauterine growth restriction and preterm action are frequently observed in such pregnancies [4].

Forty percent of these patients present with urinary system anomalies. As myometrium is thin in rudimentary horn, uterine rupture is common in pregnancies seen in this region. Potential problems give way to the recommendation of prophylactic excision when detected during a surgical procedure [5].

The present case report discusses two ectopic pregnancies in rudimentary uterine horn that were treated by excision without rupture.

Case Presentation:

Case 1: A 28-year-old female patient with G: 5 P: 3 A: 1 L: 3 was referred from an outside hospital to our clinic upon the diagnosis of ectopic pregnancy. Her ultrasonography indicated a normal outlook of normal uterus and right ovary and the presence of a gestational sac of 65x72 mm in the left adnexal region. A single living fetus was observed in the gestational sac with measurements consistent with the 16th gestational week (Figure 2). The patient was taken into operation upon the diagnosis of rudimentary uterine horn pregnancy and was subject to the excision of horn (Figure 3). With a good overall health status and stable vital signs, the patient was discharged on postoperative day 2.

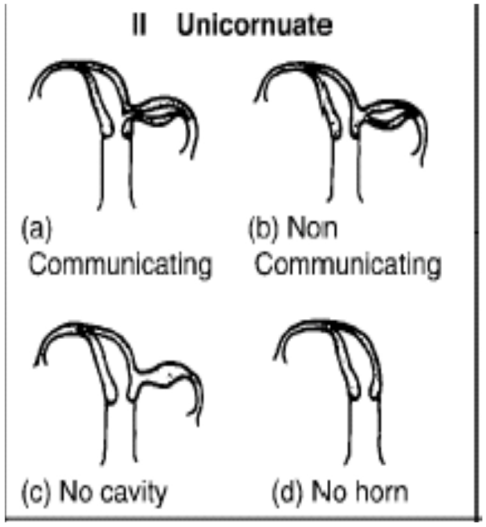

Figure 1: Classification of unicornuate uterine anomalies according to the American Fertiliy Society classification system

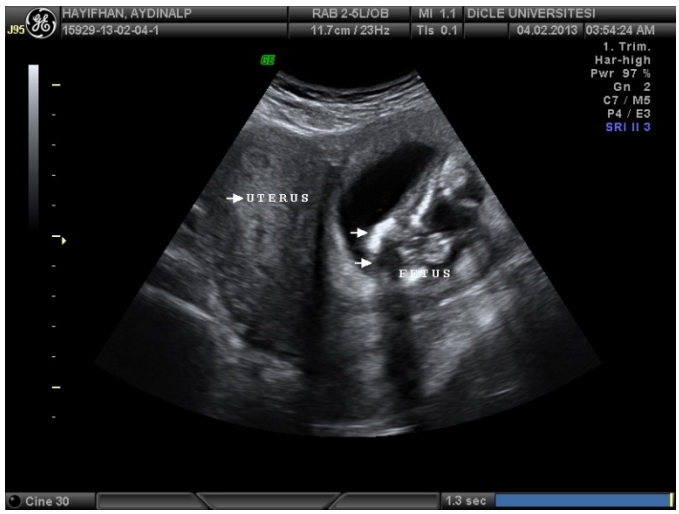

Figure 2: Ultrasonographic presentation of the first case

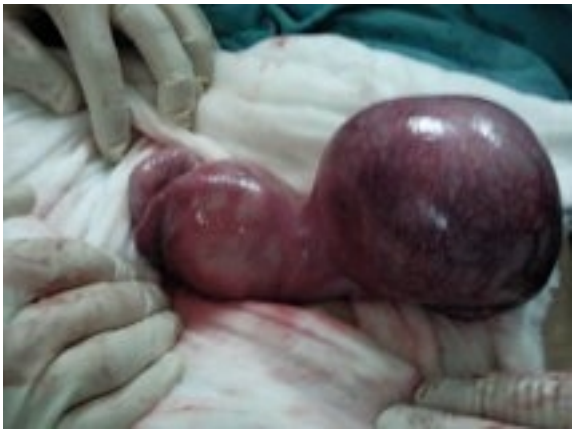

Figure 3: Intraoperative view of the first case. Ectopic pregnancy in rudimentary horn on the right.

Case 2: A 19-year-old female patient with G: 1 P: 0 A: 0 L: 0 was referred to our clinic upon the diagnosis of ectopic pregnancy. Her ultrasonography indicated a normal presentation of uterus and bilateral adnexa, as well as a gestational sac of 50x45 mm in left adnexal region and a single living fetus at its 9th week in the sac (Figure 4). Furthermore, the patient was observed to have a pelvic kidney. The patient was taken into operation upon the preliminary diagnosis of rudimentary uterine horn pregnancy and was subject to the excision of uterine horn (Figure 5). The patient was discharged in a healthy status on postoperative day 2.

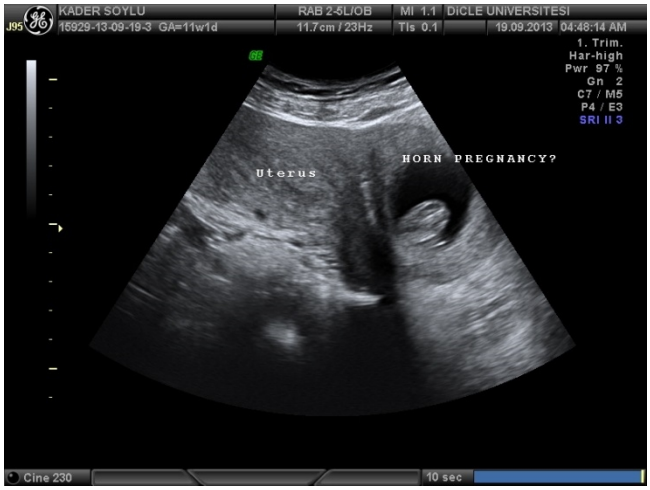

Figure 4: Ultrasonographic presentation of the second case. Gestational sac with thick myometrium observed on the right.

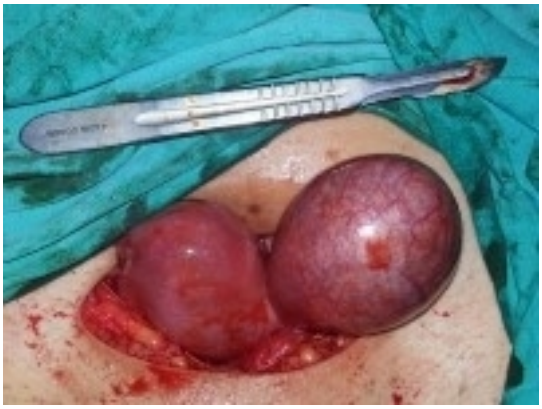

Figure 5: Intraoperative view of the second case. Ectopic pregnancy in rudimentary horn on the right.

Discussion

Non-communicating rudimentary horn pregnancies are considered to emerge through the transperitoneal migration of the sperm. Although a rare condition, a pregnancy conceived under these conditions may lead to serious complications. As the myometrium in rudimentary horn is rather thin, pregnancies emerging in this region pose a high risk of uterine rupture. Furthermore, 80-90% of these pregnancies are typically concluded with a rupture in the 10^{th} to 20^{th} week of the pregnancy.

These pregnancies may be confused with corneal, isthmic and other ectopic pregnancies. The ideal course in these cases is the establishment of the diagnosis of uterine anomaly before the pregnancy. The definite diagnosis is established by means of laparoscopy or MRI. MRI is of great importance in planning of surgical treatment, identification of urinary system malformations on the same side and prevention of urinary system injuries during surgical operations. Ultrasonography may offer certain clues in rudimentary horn pregnancies. A thick myometrium around the gestational sac is among the main diagnosis criteria. Therefore, myometrium wall thickness should be examined as a matter of importance. If the gestational sac surrounded by a thick myometrium layer is separated from the uterus, this should bring to mind tubal pregnancy or pregnancy in unicornuate or bicornuate uterus [8].

Following the diagnosis of a rudimentary horn pregnancy, the suitable approach is considered to be the removal of the horn through excision. After the laparoscopic rudimentary horn excision was reported for the first time by Canis et al. [9], the standard treatment of Mullerian dysgeneses has become laparoscopic resection. If the bond between uterus and horn is a fibrous tissue, there will be no problem. However, if the tissue here is fibromuscular, this junction needs to be subject to resection followed by laparoscopic suturing in order to avoid any

possible uterine rupture in subsequent pregnancies. Another point of importance to consider during surgical operations is that some authors suggest the excision of the ipsilateral fallopian tube to prevent any possible case of tubal ectopic pregnancy [10].

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