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RESEARCH ARTICLE

CLINICAL PRESENTATIONS AND SURGICAL MANAGEMENT OF UTERINE SEPTUM- ASSOCIATED INFERTILITY: A CASE SERIES STUDY

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Abstract

Uterine septum, a congenital uterine anomaly, is implicated in female infertility and adverse reproductive outcomes. This retrospective descriptive case series examines eight patients treated for primary or secondary infertility associated with uterine septum. Diagnostic evaluations, surgical interventions, and postoperative outcomes are presented. Hysteroscopic septum resection emerged as the primary surgical intervention, with varying success rates in achieving pregnancy postoperatively. Factors influencing outcomes include patient age, septum morphology, and associated comorbidities. Individualized treatment strategies and adjunctive therapies such as hormonal manipulation and assisted reproductive techniques are crucial for optimizing fertility outcomes. While promising, long-term reproductive prognosis post-surgery remains uncertain, warranting further research and prospective studies. This study underscores the complexity of uterine septum-associated infertility and emphasizes the need for a multidisciplinary approach to management, aiming to enhance reproductive outcomes and fulfill the reproductive aspirations of affected individuals.

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Introduction:-

Uterine septum, a congenital uterine anomaly characterized by a fibrous or muscular band dividing the uterine cavity, is associated with female infertility and adverse reproductive outcomes. Surgical correction of uterine septum aims to restore the uterine anatomy and improve fertility outcomes. This case series presents the clinical presentations, diagnostic modalities, surgical interventions, and postoperative outcomes of eight patients with primary or secondary infertility associated with uterine septum.

Methods:-

This retrospective descriptive study includes eight patients treated for primary or secondary infertility associated with uterine septum at the Department of Obstetrics and Gynecology, Mohammed VI Hospital, Oujda, from January 1, 2018, to January 1, 2023, spanning 60 months.

Inclusion Criteria:

Patients in their reproductive age.
Patients presenting with primary or secondary infertility with a uterine septum.

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Patients who underwent surgical treatment.

Exclusion Criteria:

Patients with recurrent spontaneous abortions or preterm deliveries without infertility.

Patients who were not explored or did not undergo surgical treatment.

Ethical considerations: Patient records were collected following medical ethics rules, ensuring medical confidentiality and anonymity.

Case Presentations:

Case 1: Mrs. Y.M

A 35-year-old woman with secondary infertility.

Diagnostic evaluation revealed a subseptate uterus (U2aC0V0).

Hysteroscopic septum resection was performed.

Postoperatively, the patient was lost to follow-up.

Case 2: Mrs. B.R

A 25-year-old woman with secondary infertility and a bicorporeal uterus.

Hysteroscopic septum resection was performed twice.

The patient used oral contraceptive pills postoperatively to avoid pregnancy until completing surgical interventions.

She became pregnant after discontinuing contraceptives.

Case 3: Mrs. M.F

A 34-year-old woman with primary infertility and a thick uterine septum (U2aC0V0).

Partial septum resection followed by a second surgery was performed.

The patient remained unable to conceive naturally after surgery.

Case 4: Mrs. Z.S

A 29-year-old woman with secondary infertility and a total uterine septum (U2bC0V0).

Partial septum resection followed by a second surgery was performed.

The patient remained unable to conceive despite surgical interventions.

Case 5: Mrs. A.H

A 28-year-old woman with primary infertility and a partial unicervical uterine septum (U2aC0V0).

Hysteroscopic septum resection was performed.

The patient became pregnant four months postoperatively and delivered a healthy baby boy.

Case 6: Mrs. N.N

A 38-year-old woman with secondary infertility and a partial uterine septum (U2aC0V0).

Total septum resection was performed.

The patient became pregnant five months postoperatively and delivered a healthy baby boy.

Case 7: Mrs. L.S

A 30-year-old woman with secondary infertility and a subtotal uterine septum (U2aC0V0).

Partial septum resection was performed twice.

The patient remained unable to conceive naturally postoperatively.

Case 8: Mrs. E.R

A 35-year-old woman with primary infertility and a utero-cervico-vaginal septum (U2bC1V1).

Multiple septum resections were performed.

The patient remained unable to conceive postoperatively.

Discussion:-

Uterine septum, a congenital uterine anomaly, presents challenges in the management of female infertility. This case series highlights various clinical presentations and management strategies employed in patients with uterine septum-associated infertility. The diagnosis of uterine septum often involves a combination of imaging modalities such as transvaginal ultrasound, MRI, hysterosalpingography, and hysteroscopy.

Surgical correction of uterine septum aims to restore the uterine anatomy and improve reproductive outcomes. Hysteroscopic septum resection is the preferred surgical technique due to its minimally invasive nature and high success rates. However, the success of surgical interventions may vary depending on factors such as the extent of the septum, surgical technique, and postoperative care.

In this case series, most patients underwent hysteroscopic septum resection, with varying degrees of success in achieving pregnancy postoperatively. Some patients achieved successful pregnancies shortly after surgery, while others remained unable to conceive despite multiple surgical interventions. These variations in outcomes emphasize the importance of patient selection and individualized treatment approaches in the management of uterine septum-associated infertility.

Factors such as age, septum morphology, and associated comorbidities may influence the success of surgical interventions and reproductive outcomes. Additionally, the role of adjunctive therapies such as hormonal manipulation and assisted reproductive techniques warrants further investigation in optimizing fertility outcomes in patients with uterine septum.

In the presented case series, the patients exhibited diverse clinical profiles, including primary and secondary infertility, various uterine septum configurations, and different reproductive histories. Such diversity underscores the complexity of uterine septum-associated infertility and highlights the need for individualized management strategies.

The diagnosis of uterine septum relies on a combination of imaging modalities, including transvaginal ultrasound, MRI, hysterosalpingography, and hysteroscopy. Each modality offers unique advantages and limitations, and the choice of imaging depends on factors such as availability, operator expertise, and clinical presentation. Transvaginal ultrasound is often the initial imaging modality used for evaluating uterine anomalies due to its accessibility and non-invasiveness. MRI provides detailed anatomical information and is particularly useful for assessing the extent and configuration of the uterine septum. Hysteroscopy remains the gold standard for confirming the diagnosis of uterine septum and allows simultaneous therapeutic intervention through hysteroscopic septum resection.

Hysteroscopic septum resection is the preferred surgical technique for correcting uterine septum due to its minimally invasive nature and high success rates. The procedure involves the removal of the septum under direct visualization using a hysteroscope and specialized instruments. The success of hysteroscopic septum resection depends on various factors, including the extent and thickness of the septum, the skill of the surgeon, and postoperative care. In this case series, most patients underwent hysteroscopic septum resection, with favorable outcomes in terms of restoring uterine anatomy and improving reproductive outcomes in some cases.

However, achieving successful pregnancy postoperatively remains challenging in certain patients, particularly those with complex uterine anomalies or additional reproductive comorbidities. Factors such as advanced maternal age, diminished ovarian reserve, male factor infertility, and associated endometrial or tubal pathology can influence the success of surgical interventions and reproductive outcomes. Therefore, a comprehensive evaluation of both partners is essential to identify and address all potential contributing factors to infertility.

Adjunctive therapies, including hormonal manipulation and assisted reproductive techniques (ART), may be considered in patients with uterine septum-associated infertility to optimize fertility outcomes. Hormonal therapies such as gonadotropin-releasing hormone (GnRH) agonists or antagonists may be used to suppress endogenous gonadotropin secretion and reduce the risk of intrauterine adhesions following hysteroscopic septum resection. Additionally, ART techniques such as in vitro fertilization (IVF) or intrauterine insemination (IUI) may be utilized to bypass potential obstacles to natural conception and improve the chances of successful pregnancy.

The long-term reproductive prognosis following surgical correction of uterine septum remains a topic of debate, with conflicting evidence regarding the impact of surgery on fertility outcomes. While some studies report favorable pregnancy rates and live birth rates following hysteroscopic septum resection, others suggest that surgical intervention may not significantly improve reproductive outcomes, particularly in patients with complex uterine anomalies or additional infertility factors. Therefore, patient counseling regarding the expected outcomes of surgical intervention is crucial to manage realistic expectations and guide treatment decisions.

The limitations of this case series include its retrospective design, small sample size, and lack of long-term follow-up data. Prospective studies with larger cohorts and extended follow-up periods are needed to provide more robust evidence regarding the efficacy of surgical correction of uterine septum in improving fertility outcomes. Additionally, standardized diagnostic and therapeutic protocols are necessary to ensure consistency in patient management and facilitate comparisons across studies.

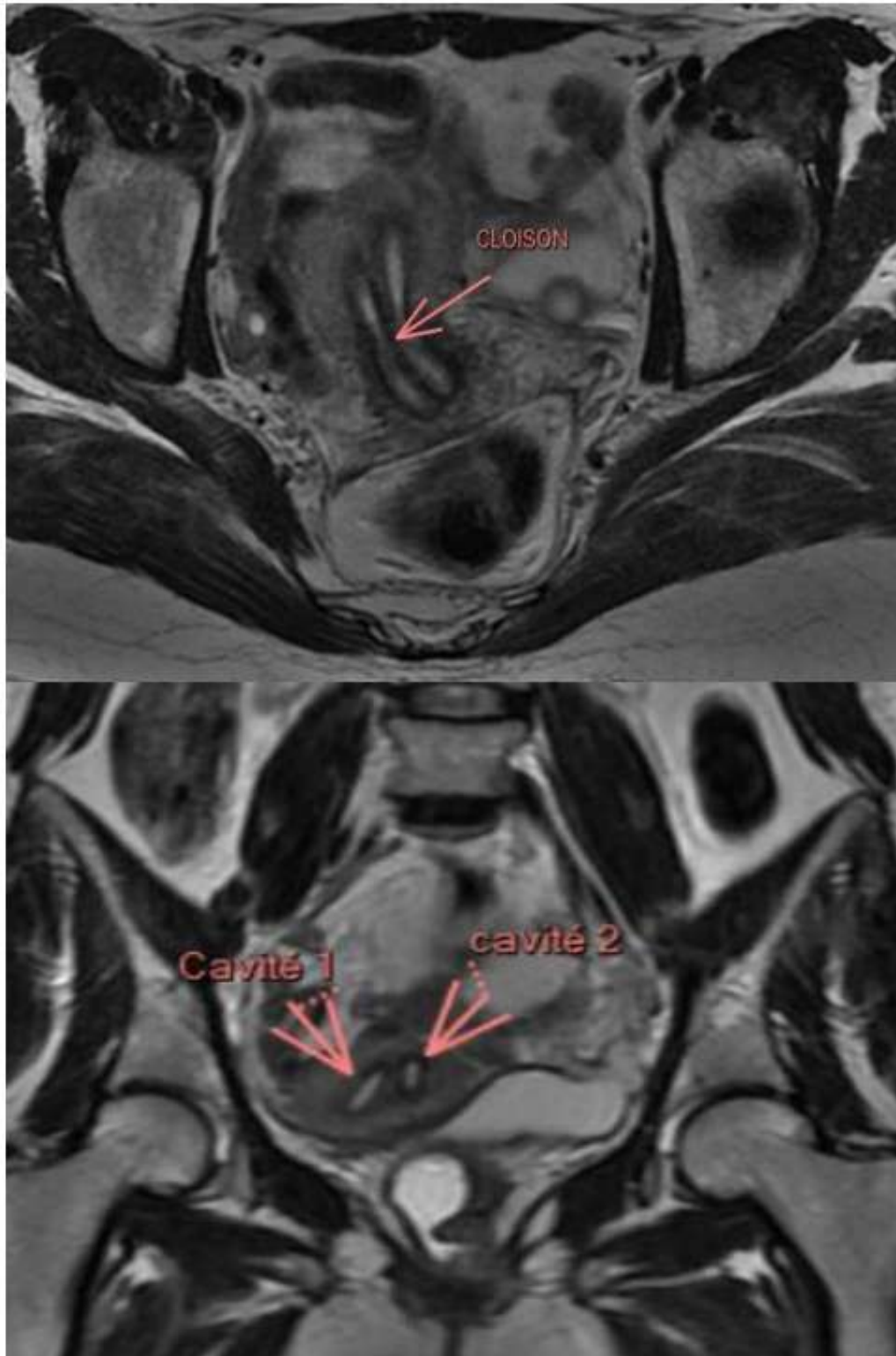
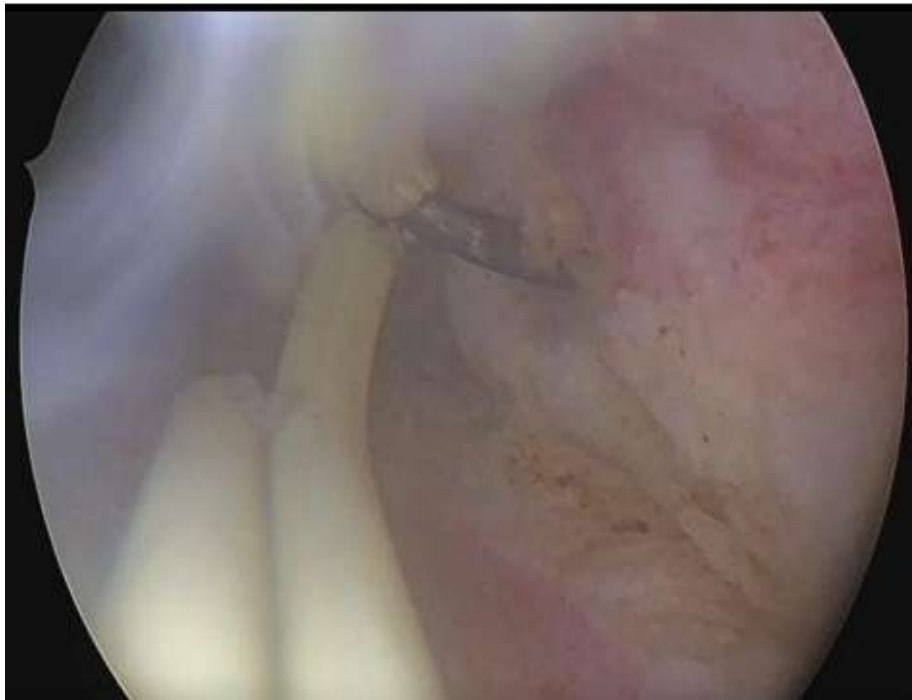
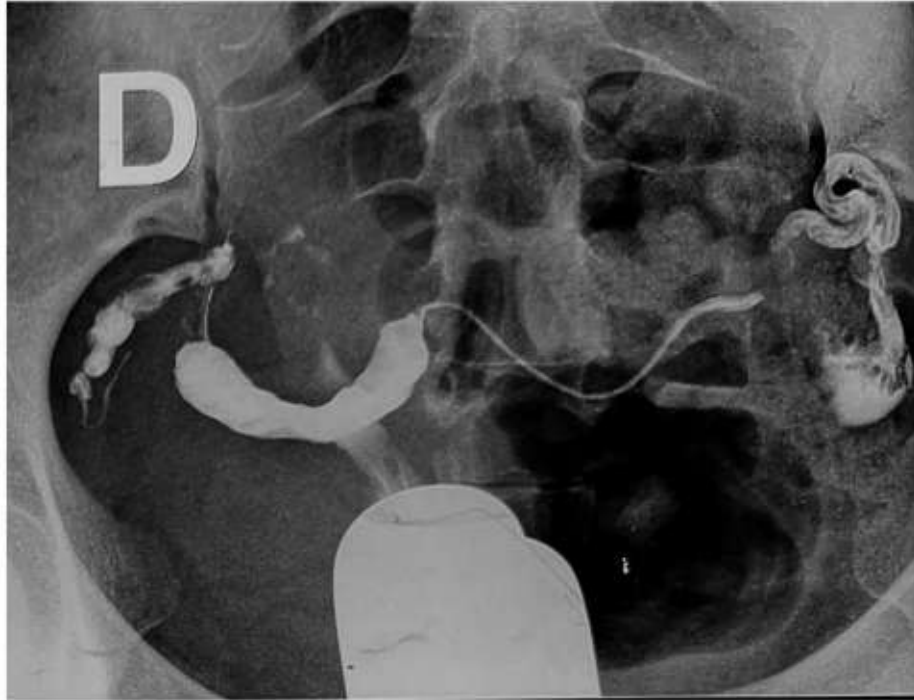


Fig. 6 : IRM pelvienne en coupe axiale et sagittale mettant en évidence un utérus cloisonné total unicervical (cas clinique 8)



Uterine septum-associated infertility poses significant challenges to affected individuals, necessitating a comprehensive diagnostic and therapeutic approach. This case series highlights the diverse clinical presentations and management strategies employed in patients with uterine septum-related infertility. Through a combination of imaging modalities, including transvaginal ultrasound, MRI, hysterosalpingography, and hysteroscopy, accurate diagnosis and characterization of uterine septum were achieved in all cases. Hysteroscopic septum resection emerged as the primary surgical intervention, with favorable outcomes observed in terms of restoring uterine anatomy and improving reproductive outcomes in select patients.

However, achieving successful pregnancy postoperatively remains contingent upon various factors, including patient age, reproductive history, and associated infertility factors. Adjunctive therapies such as hormonal manipulation and assisted reproductive techniques may be necessary to optimize fertility outcomes in certain cases. Despite the promising results observed in this case series, the long-term reproductive prognosis following surgical correction of uterine septum remains uncertain, highlighting the need for further research and prospective studies with larger cohorts and extended follow-up periods.

Conclusion:-

The management of uterine septum-associated infertility requires a multidisciplinary approach, encompassing accurate diagnosis, individualized treatment strategies, and comprehensive patient counseling. By addressing the underlying anatomical abnormalities and optimizing reproductive function, clinicians can enhance the chances of achieving successful pregnancy and fulfilling the reproductive aspirations of affected individuals.

This case series contributes to the existing literature on uterine septum-associated infertility, providing valuable insights into the clinical presentation, diagnostic evaluation, and therapeutic management of this complex condition. By disseminating knowledge and sharing clinical experiences, we aim to advance our understanding of uterine septum-related infertility and improve the care and outcomes of affected patients.

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