

# Epidemiological -Clinical Profile and Management of Female Infertility in the City of Isiro

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**Introduction:-** Female infertility is a public health problem by the WHO. Several couples around the world are faced with this problem, a real psychosocial drama. Medical and surgical history, hormonal disorders are its main contributing factors. Currently, several treatment options are possible.

**Patients and method:-** Descriptive cross-sectional study, including 119 patients followed in the gynecology-obstetrics department for the desire of motherhood. It extends over a period of 2 years. Age, marital status, contributing factors, gynecology-obstetric history, type of infertility, different treatments offered and treatment outcome were our main variables of interest.

**Results:-** The overall frequency of female infertility was 37.5%. Women aged 30 to 34 and married women were the most affected. Ovulatory disorders were the most common etiology with a clear predominance of secondary infertility. Cystectomies and clandestine abortions were among the most found factors. The gynecological ultrasound was the main investigative workup because of the impossibility of performing other examinations. Of all the patients treated, only 23 women had conceived after the treatment.

**Conclusion:-** Infertility is a serious problem for couples in our circles. The university clinics of Uélé are faced with a problem of investigation and its success rate remains low.

**Keywords:-** Epidemiological and clinical profile, female infertility.

## I. INTRODUCTION

Female infertility is defined as the inability of a woman to conceive without contraceptive measures 12 months or more after regular sexual intercourse(1).

Marriage and procreation occupy an important place in the family constitution of several countries because the child gives meaning to life. Unfortunately, many couples around the world are faced with the problem of infertility, a source of stress, anxiety, infidelity, divorce, in short, it is a psychosocial drama (2, 3).

It is due to disorders either of ovarian, uterine, tubal or endocrine origin. As contributing factors, we cite the woman's age, the number of clandestine abortions, sexually transmitted infections, medical and surgical history, the use of certain contraceptives(1).

The WHO estimated the number of infertile women at 48.5 to 72.4 million, a real public health problem(1).

This problem concerns approximately 10 to 15% of married couples in the United States and Western Europe(4).

In Africa, there is a variation in infertility from one region to another; it is 20 to 30% in Cameroon, 15% to 17% in Morocco and around 30% in Nigeria (5, 6)

In the DRC, this problem exists according to the literature and studies show a prevalence of 16%. The responsibility remains shared between male infertility (21.4%) and female infertility (34.6%) (7). It seems to be attributed to the woman in the majority of cases, thus creating stigmatization, divorce or polygamy. Therefore, the woman is called to sacrifice everything to finally have a child (7).

She thus becomes easy prey for healers and charlatans, she does not resort to appropriate care until late. Several aspects of infertility treatment are possible, ranging from medical treatment to surgical treatment to medically assisted procreation techniques (1, 8).

The young province of Haut-Uélé in general and the city of Isiro in particular are not spared by this scourge but the lack of data motivates the realization of this work with the aim of identifying the problem of female infertility and to improve his treatment somewhat.

## II. PATIENTS AND METHODS

This is a descriptive cross-sectional study, including 119 patients followed in the gynecology-obstetrics department for the desire to conceive. It extends over a period from January 01, 2020 to December 31, 2022, i.e. a duration of 2 years.

Were included in the study, all patients of childbearing age who had been followed in the Gynecology-obstetrics department of the Uélé university clinics (CUU) for

infertility during the study period and who had a file containing the majority of our parameters of interest.

It is a retrospective study with a documentary analysis approach. Sampling was non-probability by completeness of cases; The included were listed in the service registers. We used a pre-established data collection sheet to collect our parameters of interest.

We used patient files and registers. Age , level of study, occupation, marital status, reasons for consultation,

predisposing factors, gynecological-obstetrical history, assessment or analyzes carried out, type of infertility, the various treatments offered and the result obtained were our main variables of interest.

Our data was entered using Microsoft Word 2019, exported to Excel 2019 and then analyzed on SPSS version 20.0. The data collected was grouped and presented in the form of tables or figures.

### III. RESULTS

#### A. Global frequency

The overall frequency was taken from a sample of 119 patients followed for infertility out of a population of 317 patients admitted to the gynecology-obstetrics department of the CUU during our study period, ie an overall frequency of 37.5%.

#### B. Epidemiological and clinical aspects age range

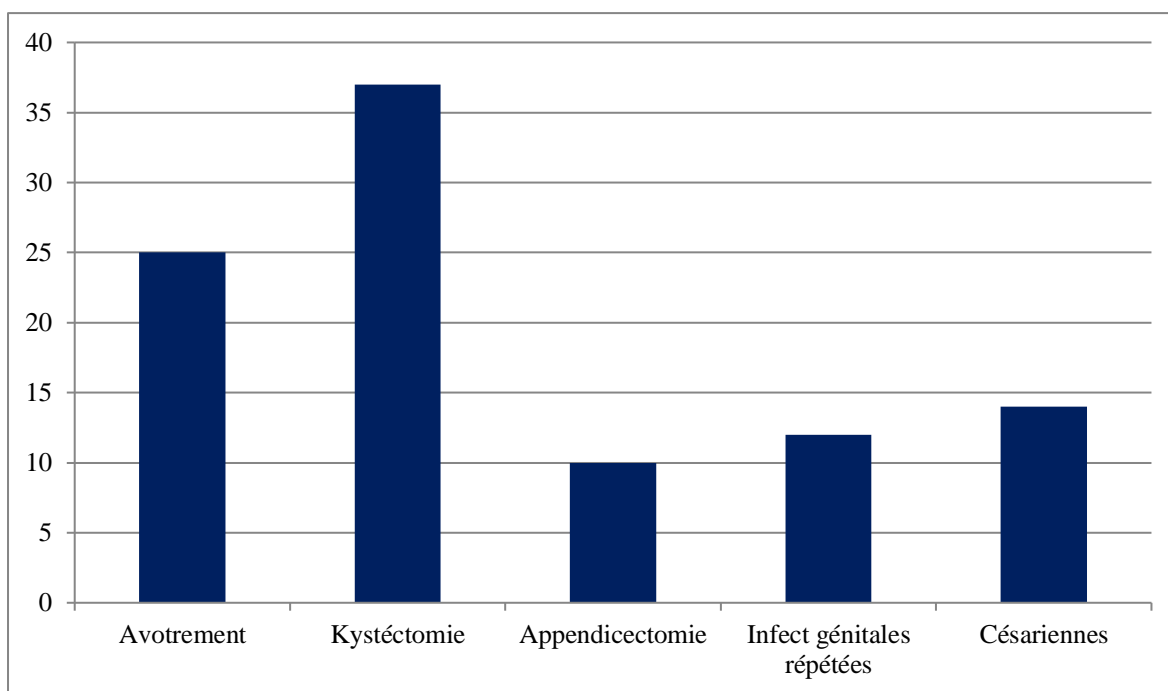


Fig. 1: Distribution of patients by age group

It can be seen from this figure 1 that the age group between 30 and 34 years old was more affected by infertility, i.e. 25.2%

### IV. MARITAL STATUS AND TYPE OF INFERTILITY

	Status		Type of infertility	
	Brides	singles	Primary	Secondary
<b>Effective</b>	84	35	36	83
<b>Frequency</b>	70.6%	29.4%	30.3%	69.7%

Table 1: Distribution of patients according their marital status and type of infertility

Table 1 reveals that married women were more affected by infertility in 70.6% of cases and secondary infertility was the type most encountered in our patients.

A. Contributing factors

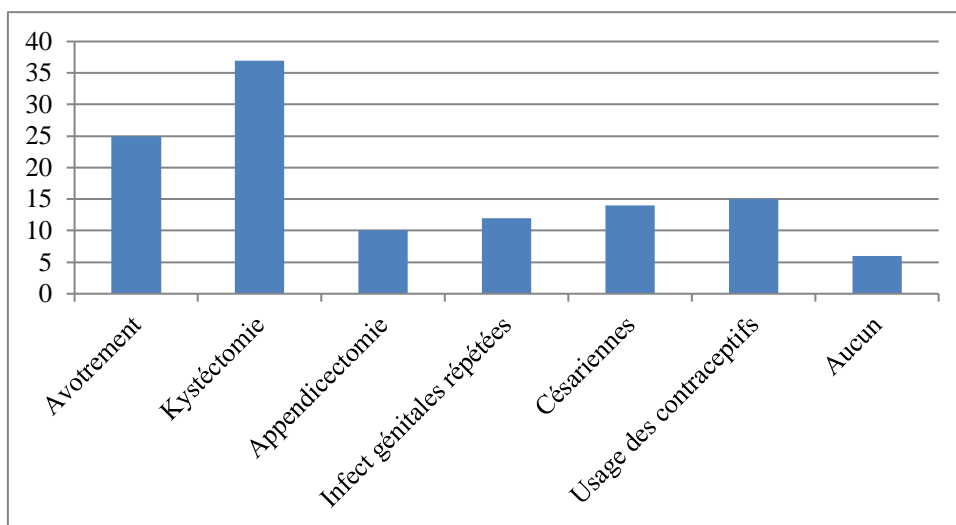


Fig. 2: Distribution of patients according to factors favoring infertility

The result of the table above shows that ovulatory disorders were the most observed predisposing factors, i.e. 31.1% of cases.

B. Gyneco-obstetric history of patients

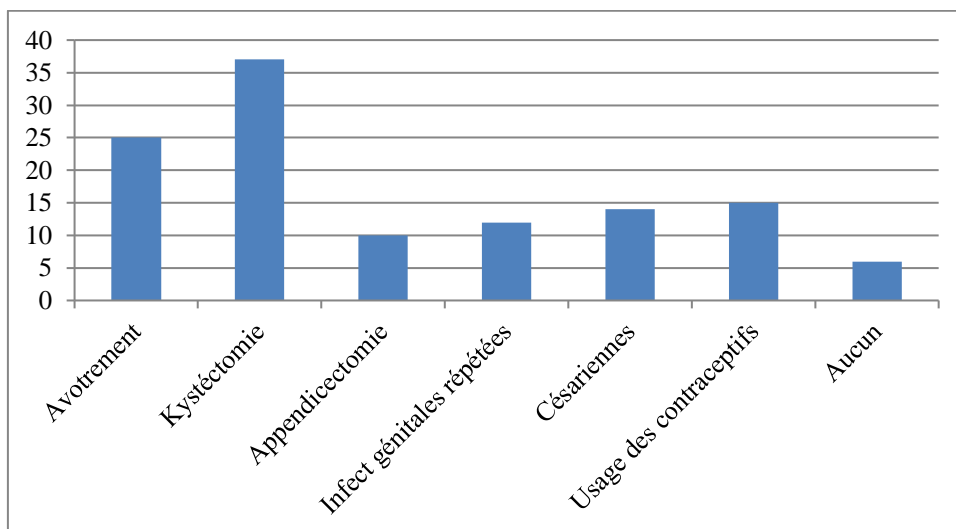


Fig. 3: Distribution of patients by history

This figure 3 shows us that the cystectomy was the most found antecedent, with 37 cases.

C. Therapeutic and evolutionary aspects

Treatment received and outcome of treatment

Table n°II: Distribution of patients according to the treatment received and outcome after treatment

	Treatment received		After treatment	
	Medical	Surgical	positive pregnancy	Negative pregnancy
<b>Effective</b>	103	16	23	96
<b>Frequency</b>	86.6%	13.4%	19.3%	80.7%

The majority of our patients 103 had benefited from medical treatment, but only 19.3% of them had to conceive after this treatment.

## V. DISCUSSION

### A. Global frequency

During the study period which is 2 years, out of 317 files of patients followed in the service, we recorded 119 cases of female infertility, that is an overall frequency of 37.5% .

TRAORE Y and DOLO T, in similar studies carried out in Bamako respectively found a frequency of 15% and 11.4% (8, 9) These rates are slightly lower than ours (37.5%), this would be explained by the fact that in Bamako there are several gynecologist-obstetrician specialists in their services while ours only has one for the moment, hence the need to encourage specialization in gynecology-obstetrics to reduce this frequency observed in the city of Isiro.

Our result is far superior to the results of these two works. The reasons can be multiple: different socio-economic realities, different medical-surgical backgrounds, etc.

### B. Epidemiological and clinical aspects age range

Our study showed that approximately 25.2% of women affected by infertility were in the age group of 30 to 34 years. This result corroborates those of KALUME from Goma in the DR Congo who found that 23.8% of the patients were aged between 30 and 34 years and from MAÏ A, in Algeria which was the same age group (10, 11).

It is no longer to be demonstrated that the advancing age of the woman goes hand in hand with the occurrence of infertility and this because of the negative impact of age on the ovarian reserve. On the other hand, young people under the age of 24 were also affected by infertility in 23.5% of cases in our study, which seems to be linked to the high frequency of voluntary terminations of pregnancies, urogenital infections and abuse of contraceptives at this age of life.

### ➤ Marital status and type of infertility

Our study shows that 70.6% of women with desire for motherhood were married women. We believe that married women do not find it taboo to talk frankly about their sex life and they have enough means to even consult a specialist and do not delay in consulting, while unmarried women will only be able to realize their problem later and to some the lack of financial means can constitute a true obstacle for a medical follow-up in an appropriate and equipped structure from where a recourse to the medicinal plants or alternatives. As for the type of infertility, we noted a clear predominance of secondary infertility over primary infertility in 69% of cases. This result corresponds to those of several other African authors including that of Mpoy (69.57%) in Kisangani/DR; that of Ugwu et al (76.8%) in Nigeria (14, 15),... This situation seems identical in all regions of sub-Saharan Africa and part of Asia because the study conducted by Maya and collaborators corroborated those of African authors (16) and this seems intimately linked to urogenital infections often untreated or badly treated, clandestine abortions, cystectomies, etc. (17, 18).

### ➤ Predisposing or etiological factors

In our study, the most common etiological factor is ovulatory disorders with 35 cases, or 29.4%. Many other studies around the world have also found ovulatory disorders among the causes of female infertility, but to this are added tubal obstructions, endometriosis (1, 9 and 11),... We believe the high rate polycystic ovaries, the abusive use of contraceptives disrupting the menstrual cycle would be the basis of ovulatory disorders in our environment.

### ➤ Gyneco-obstetric history of women

Our series shows that approximately 31.1% of patients underwent a cystectomy and 21% had performed one or more clandestine abortions with or without curettage. This result agrees with that of WEMBULUA who found a very significant relationship between secondary infertility and a history of abortion with curettage (12). In the DR, our country, abortion is prohibited and its practice would be doomed to hiding sometimes left in the hands of charlatans, it is obvious that the technique and aseptic measures are still not respected which leads to complications such as infertility and the like (16, 17 and 19). Poorly performed curettage exposes these women to uterine synechiae, a source of female infertility. Enduterine maneuvers by non-expert hands also contribute to increasing the prevalence of infertility.

In several corners of our country, wedge resection of the ovary is still performed sometimes even on functional ovarian cysts. These interventions expose young women either to premature ovarian exhaustion or to pelvic adhesions which compromise their obstetrical future.

### C. Therapeutic and evolutionary aspects

#### ➤ Treatment received and treatment outcome

We see, 103 of our patients (86.6%) benefited from medical treatment and 16 patients (13.4%) from surgical treatment. The same result was observed in BAMAKO by TRAORE Y during a similar study which found 83.8% for medical treatment and 16.2% for medical treatment (9). At the end of the treatment offered by the service, out of a total of 119 patients, only 23 women, or 19.3%, had conceived. This result is close to that found in BAMAKO by TRAORE Y who found 18.8% conception after treatment. On the other hand, our result is superior to that of Diadihou F and collaborators who found about 11.5% conception (9, 20).

This situation observed in our series would be the result of good care by the medical team of the university clinics of Uélé with its gynecologist-obstetrician specialist. Moreover, the lack of equipment and the weak technical platform do not allow us to do better.

## VI. CONCLUSION

Female infertility is a serious couple problem in our circles. Hormonal dysfunctions following poorly indicated and/or poorly performed cystectomies, contraceptive abuse, voluntary termination of pregnancy accompanied by curettage performed by non-experts and insufficiently treated urogenital infections are the main etiological factors or factors favoring infertility. women in the city of Isiro. The

university clinics of Uélé, which being the only health institution at the tertiary level in the city of Isiro and the young province of Haut-Uélé, find themselves faced with a problem of investigation to establish with precision the hormonal deficit responsible for the female infertility. The success rate, although low, is among the best results observed in the sub-Saharan region.

### CONFLICT OF INTEREST

The authors declare no conflict of interest.

### AUTHORS' CONTRIBUTION

Jeanine NADI Aninyesi initiated the work, examined and treated the patients. Jérôme BADHOKA Kano prepared, arranged and corrected the text to be submitted for publication, Corneille MUAMBA Muamba and Sylvie BILONDA Ntumba collected the data and wrote the work.

### REFERENCES

- [1.] WHO, International Classification of diseases , *14th Revision*(ICD-14) Geneva: WHO 2020;
- [2.] Loke , AY, Yu , P.-L. and Hayter , M. (2011). Experiences of subfertility among Chinese couples in Hong Kong: a qualitative study. *Journal of Clinical Nursing*, 21, 504-512. <https://doi.org/10.1111/j.1365-2702.2010.03632>.
- [3.] Schmidt L, Social and psychological consequences of infertility and assisted reproduction – what are the research priorities ?,*human Fertility* 12, 14–20; 2009.
- [4.] Linda J. Heffner , Human Reproduction , *1st ed de boeck*, Brussels; 2003
- [5.] Nana P, Wandji JC, Fomulu JN, Mbu RE, Leke RJI, Woubinwou , Psycho-social aspects in infertile patients at the Main Maternity Hospital. *Mother and childhealth*. (2011); 8(1):1-5.
- [6.] World Health Organization Infertility Definitions and Terminology.2015, Available at: <http://www.who.int/reproductivehealth/topics/infertility/definitions/en/>(accessed on 09/27/2022 at 4:41 p.m.)
- [7.] WembuluaB., Infertility of the couple: epidemio - clinical study and evaluation of the care in KISANGANI, *KisMed*2012;
- [8.] Dolo T. Study of marital sterility in the Gyneco - Obstetrics department of the Point "G" National Hospital (About 208 cases) *Thesis of Med* . Bamako 1997, n°17
- [9.] Traore Y, Management of secondary female sterility in the Gynecology-Obstetrics department of the Reference Health Center of Commune V of the District of Bamako. *Thesis: Med* , Bamako 2008, 99 p.
- [10.] Kalume. M, Clinical and etiological profile of female infertility in GOMA/DRC ., *KISMED* Ed 2014, Vol 5
- [11.] Mai A., Actors at risk of female infertility in western Algeria (Region of Oran and Sidi Bel Abbes), Thesis at DjillaliUniversityLiabés of Sidi Bel - Abbés, *Fac.Sc. Biology*, 2016, pg 122
- [12.] WembuluaB., Infertility of the couple: epidemio - clinical study and evaluation of the management a kisangani, *unikis*, 2022
- [13.] Obuna JA, Ndukwe , EO, UgbomaHA A,EjikemeBN , UgbomaE.W. \_ (2012). Clinical Presentation of Infertility in an Outpatient Clinic of a Resource Poor Setting, South-East Nigeria. *International Journal of tropical disease & health* 2(2): 123-131, [www.sciencedomain.org](http://www.sciencedomain.org).
- [14.] Mpoy W., Contribution to the study of sterility in Kisangani . *Specialization dissertation in Gynecology-obstetrics*, unpublished, Faculty of Medicine. 2011
- [15.] Ugwu EO, Onwuka CI, Okezie O. Pattern and outcome of infertility in Enugu: the need to improve diagnostic facilities and approaches to management . *Niger J Med* . Apr-Jun; 21(2):180-4.2012.
- [16.] Adeyemi AS, Adekunle , DA, Afolabi , AF Pattern of gynecological consultations at LadokeAkintola University Teaching HospitalOsogbo . *Niger J. Clin . Pract.*, 12.47-50.2009.
- [17.] Maya N, Mascarenhas1, Seth R. Flaxman, Ties Boerma , Sheryl Vanderpoel , Gretchen A. Stevens, National, Regional, and Global Trends in Infertility Prevalence Since 1990: A Systematic Analysis of 277 Health Surveys. *PLOS Medicine* , December | Volume 9 | Issue 12 | 2012. e1001356. [www.plosmedicine.org](http://www.plosmedicine.org) .
- [18.] Nwajiaku LA, Mbachu, Ikeako L., Prevalence, Clinical Pattern and Major Causes of Male Infertility in Nnewi , *South East Nigeria : A Five Year Review* . AFRIMEDIC Journal Volume 3, No 2.2012.
- [19.] Larsen, UG Masenga and Mlay J. Infertility in a community and clinic-based sample of couples in Moshi , northern Tanzania . *East African Medical Journal* Flight. 83 No. 1,2010.
- [20.] DiadhiouF, Epidemiological profile and cost of conjugal infertility at the University Hospital of Dakar (about 281 cases collected in 5 years from January to December 1987). Proceedings of the first congress of the society of gynecology and obstetrics of Benin and Togo Cotonou 24- March 25 and 26, 1988.