

Secondary Infertility of the Couple: Epidemiological and Clinical Aspects of Patients at the General Hospital of Loandjili in Pointe Noire (Republic of the Congo)

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ABSTRACT

Objective: Describe the epidemiological and clinical aspects and report the paraclinical anomalies in the case of secondary infertility of the couple to the General Hospital of Loandjili.

Method: Descriptive cross-sectional study, conducted from January 1, 2017 to December 31, 2018, comprehensively including all the patients who consulted for secondary infertility, as defined by the World Health Organization (WHO). This involved the inability of a previously conceived couple to re-conceive and carry a pregnancy to term after a year or more of regular, unprotected sex for women under 35 years and after six months for women over 35. The presence of the spouse was required in the event of an abnormal spermogram. The variables studied were socio-demographic, reproductive, clinical, and para-clinical.

Results: The couple's secondary infertility represented 25% of all Gynecology consultations (98/392). The patients were on average 34.7 ± 1.5 years old with a predominance of the 31 to 40 years age group. They were paucigest (2.8 ± 0.1) and pauciparous (1.8 ± 0.1), consulting for infertility with a median duration of 5 years. Their spouse had an average age of 41.3 ± 3.6 years. Clinically, 20% of patients had a history of pelvic surgery for benign gynecological disease. Biologically, genital infections were predominant (73.4%), most often associated with abnormalities of the cervical mucus (59.2%) and post coital test (37%). Regarding the spouse, spermogram abnormalities were noted in 45% of cases and dominated by oligozoospermia (35%). In 65% of cases, the antral follicle count was insufficient in 22% and zero in 6.2%. The indications for medically assisted procreation (MAP) were of the order of 20%, while only half had been able to benefit from this service abroad with six pregnancies including four deliveries with live children.

Conclusion: Medically assisted procreation would be an alternative in the management approaches. Thus, efforts must be made to provide an appropriate response to that whose treatment requires this indication.

Keywords

Infertility, Epidemiology, Clinic, Paraclinic, Pointe-Noire.

Introduction

Defined by the World Health Organization (WHO) as the inability of a couple to achieve conception and carry a pregnancy to term

after a year or more of regular, unprotected sex for women under the age of 35 years and after six months for women over 35 [1], infertility affects 30% of couples in sub-Saharan Africa [2]. When it is secondary, it represents 60.6% of cases [2]. These causes are dominated by tuboperitoneal lesions [3,4]. It represents a social drama and is often one of the major causes of marital disagreement

or divorce. As marriages are carried out in the direction of procreation, infertility then constitutes a severe test that the couple must overcome [5].

In Congo, couple's infertility is still poorly understood, and often wrongly viewed as a punishment for women and a problem with man's virility. Therefore, it requires the exploration of the couple. This condition is currently being revolutionized by medically assisted procreation (ART) which in our context is still not very accessible. This present work aims to describe the epidemiological and clinical aspects, and to report the paraclinical abnormalities in the case of secondary infertility of the couple at the General Hospital of Loandjili.

Patients and Method

Descriptive cross-sectional study, conducted from January 1, 2017 to December 31, 2018, comprehensively including all the patients who consulted for secondary infertility. The presence of the spouse was required in the event of an abnormal spermogram. The variables studied were socio-demographic and reproductive (age, occupation, age of the partner, pregnancy, parity, duration of infertility), clinical (surgical and medical history) and paraclinical:

- Biological: the study of cervical mucus through the Insler score [6], chlamydia serology, mycoplasma research, the post-coital test, the determination of prolactinemia, the determination of FSH and AMH (D2-3 of the cycle), the dosage of oestradiol (D3 of the cycle) and the spermogram of the spouse (analysed according to the standards defined by the WHO 2010 classification [7]).
- Radiological: antral follicle count (AFC) on endovaginal ultrasound on D3-5 of the cycle and hysterosalpingography. Ovarian reserve was assessed by assaying FSH, AMH, oestradiol and antral follicle count.

Epi-info 6 software was used for the statistical analysis. Qualitative variables were represented as a percentage. The quantitative variables were represented as the average and its standard deviation or as the median and its quartiles (q1-q3) when the standard deviation of the mean was greater than one tenth of its entire part.

Results

The couple's secondary infertility represented 25% of the reasons for consultation in Gynecology (98/392). The patients were on average 34.7 ± 1.5 years old with a predominance of the 31 to 40 years age group. They were paucigest (2.8 ± 0.1) and pauciparous (1.8 ± 0.1), consulting for infertility with a median duration of 5 years. Their spouse had an average age of 41.3 ± 3.6 years. The median duration of infertility was 5 years [2.5 - 7], with a median age of 34 years at the first consultation (Table 1).

Table 1. Epidemiological characteristics of the couples.

	N	%
Age (years)		
Mean \pm SD	34.7 \pm 1.5	
Extreme [Min – Max]	[21 – 49]	
[21 - 30]	22	22
[31 - 40]	64	65
[41 - 49]	12	12
Income-generating activity	68	69
Spouse's age (years)		
Mean \pm SD	41.3 \pm 3.6	
Extreme [Min – Max]	[28 – 55]	
28-30	4	4
31-40	42	43
41-50	40	41
51-55	12	12
Duration of infertility (years)		
Median (q1-q3)	5 (2,5-7)	
Extreme [Min - Max]	[2 – 10]	
2 à 5	70	72
6 à 10	28	28
Gestivity		
Mean \pm SD	2.8 \pm 0.1	
Extreme [Min – Max]	[1 – 7]	
Parity		
Mean \pm SD	1.8 \pm 0.1	
Extreme [Min – Max]	[0 – 4]	

Clinically, 20% of patients had a history of pelvic surgery for benign gynecological disease and 2% reported a notion of thyroidectomy. In 96% of cases, no medical history was found. A notion of chemo-radiotherapy for breast cancer and epilepsy treated with sodium diproate, were each reported in two cases.

Biologically, genital infections were predominant, most often associated with abnormalities of cervical mucus and post-coital test, as reported in Table II. Regarding the spouse, spermogram abnormalities were noted in 45% of cases and dominated by oligozoospermia (Table 2).

Table 2: Biological characteristics.

	n	%
Sexually Transmitted Infections	72	73.4
<i>Mycoplasma</i>	46	64
<i>Chlamydia</i>	26	36
Cervical mucus	58	59.2
Good quality (Insler score > 12)	32	55.2
Insufficient / Poor (Insler score < 6)	26	44.8
Positive postcoital test (Hunher test)	36	37
Elevated prolactinemia	8	8.2
Collapsed ovarian reserve ⁽¹⁾	14	14.3
Early ovarian failure ⁽²⁾	12	12.2
Spermogram of the spouse		
Normal	54	55
Asthenozoospermia	2	2
Spontaneous agglutination	4	4
Oligo-Astheno-Teratozoospermia	4	4
Oligozoospermia	34	35

⁽¹⁾ Collapsed ovarian reserve: AMH level between 0.5 and 1 ng / ml, FSH level > 10 IU / l between D2-3 of the cycle [8].

⁽²⁾ Early ovarian failure defined by a drop in estradiol levels associated with an increase in FSH > 25 IU / l before 40 years of age leading to hypergonadotropic hypogonadism [8].

Radiologically, the abnormalities found on pelvic ultrasound and hysterosalpingography were reported in Table 3. The follicular count was performed in patients aged 35 and over (in 64 cases, or 65%).

Table 3: Imaging features

	n	%
Endovaginal ultrasound		
<i>Polymicrocystic ovaries</i>	4	6
<i>Antral Follicle Count (AFC)</i>		
<i>Absent</i>	4	6.2
<i>Insufficient (<5 follicles)</i>	22	34.4
<i>Normal (6-7 follicles of 2-10mm)</i>	38	59.4
Hysterosalpingography		
<i>Normal</i>	66	80.5
<i>Hydrosalpinx</i>	2	2.4
<i>Tubal obstruction</i>	8	9.7
<i>Tubal endometriosis</i>	2	2.4
<i>Corporeal synechia</i>	4	5

Two cases of medical castration with freezing of the gametes had been recorded.

The indications for assisted reproduction were around 20%, while only half had been able to benefit from this benefit abroad with six pregnancies, including four deliveries with live children.

Discussion

Infertility affects Congolese women in the same proportions as Africans [2, 3, 9]. However, the cultural differences observed in the sub-regions of the continent, between West Africa and Central Africa, would contribute to the noted disparity in the age of patients. In fact, the age of the patients in our series was superimposable on that of the Cameroonian series [3], and far superior to that reported in the Ivorian series [2], explained by the often early marriages observed in this sub-Saharan African region [10].

Also, the sometimes-late union in Central Africa could explain the low parity found in our study and in that of Kinshasa [9] in which a predominance of pauciparous and nulliparas is noted. Moreover, the median duration of infertility was close to those found in Abidjan [2] and Kinshasa [9], respectively 4.9 and 4 years.

The couple's exploration has been in favor of multiple-origin infertility with male involvement in 45% of cases.

The female causes were dominated by sexually transmitted infections (chlamydia, mycoplasma) responsible in most cases of tubal lesions (hydrosalpinx, obstruction). In addition, other African series [11, 12] report, among other things, many cases of synechia, consequences of clandestine abortions, which are often unsafe. These abnormalities were in most cases associated with abnormalities of the cervical mucus and disturbances of ovarian

function. Thus, corroborating the results of Gandji [13] and Faye Dieme [14] in Cotonou and Dakar respectively, the ovarian reserve was collapsed in 14.3% of cases and early ovarian failure observed in 12.2%, in our series. This could be explained by the acceleration of the loss of the ovarian follicular pool from 25,000 to 38 years for 10,000 to 40 years [8]. Two-thirds of the patients who underwent ovarian reserve assessment were over 35 years of age. Thus, in a third of cases, the follicular ultrasound count was insufficient.

When it came to male involvement, oligozoospermia was the predominant spermogram abnormality, corroborating the observations of Batou [15] and Drissi [16].

In the light of its results, several indications of assisted reproduction emerge for which the accessibility and the cost constitute a real obstacle for the patients. This is how the care was taken as appropriate, but outside PMA as reported by Mboloko in the Democratic Republic of Congo [17].

Conclusion

Infertility is one of the challenges in our daily practice, on the one hand, but also in health in our countries. Although mixed, female causes are dominated by genital infections responsible for severe pelvic sequelae and ovarian dysfunction. ART is a safe alternative in management approaches. Thus, efforts must be made to provide an appropriate response to that whose treatment requires this indication.

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