

## Biological study of uro-genital trichomonosis in women during gynecological consultation at the prefectural hospital of Macenta, Guinea

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### Abstract

**Objectives:** The objectives of this study were to: calculate the frequency of urogenital trichomoniasis, describe the socio-demographic characteristics and analyze the biological samples.

**Methodology:** This was a six (6) month cross-sectional prospective study carried out in the maternity ward (gynecological consultation) and in the laboratory of the Prefectural Hospital of Macenta. All the women who came for gynecological consultation were included in the study and among them, all those who presented a laboratory examination report for vaginal secretions and / or urine during the study period. Not included in the study were all the women who came for a gynecological consultation but who had not received a laboratory examination report for vaginal secretions and / or urine and all those already undergoing treatment to imidazole in the 15 days preceding the survey were not included. After applying the selection procedure (inclusion and non-inclusion criteria), we obtained a sample size N = 703 cases.

**Results:** The frequency of urogenital trichomoniasis was 26.46% among urogenital infections. The epidemiological profile was that of: young women aged 22-27 (42.47%), housewife (39.76%), having a primary education (30.43%) and married (28.53%). half of the patients were asymptomatic followed by those with fetid leucorrhoea 32.61%. High positivity was found in vaginal secretions (30.41%).

**Conclusion:** Urogenital trichomoniasis is a sexually transmitted infection, common in women of childbearing or childbearing age. It constitutes a public health problem, one of the control strategies for which it involves sensitization and care for women / couples at all levels of the health pyramid.

**Keywords:** Urogenital trichomonosis; Urogenital infection; Gynecological consultation

### 1. Introduction

Urogenital trichomoniasis is a sexually transmitted infection caused by a protozoan of the genus *Trichomonas* which is diagnosed more frequently in women than in men [1]. It is a cosmopolitan parasite that causes vaginitis manifested primarily by three symptoms: leucorrhoea, burns and vulvar pruritus [2]. Among the three species of *Trichomonas* parasites of man (*Trichomonas vaginalis*, *Trichomonas tenax*, *Trichomonas intestinalis*), only *Trichomonas vaginalis* is highly pathogenic, infesting the urogenital tract and possibly being responsible vaginitis and urethritis [3].

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Transmission is sexual in the majority of cases. It affects both sexually active layers between 15 and 35 years old: 40% of women and 15% of men. About 25 to 85% of men are infected with *Trichomonas vaginalis* if their partner is. On the other hand, 100% of women are infected when their partners present with trichomoniasis [5]. Acute infections are characterized by severe vulvar pruritus, vaginitis, vulvitis, with dysuria and dyspareunia and bleeding spots on the mucosa (in 2% of patients) causing macular colitis or petechiae (raspberry-like cervix). In women, 50% of cases are asymptomatic [6]. *Trichomonas parasitosis* is ubiquitous; its incidence is estimated at 200 million cases per year worldwide [7].

WHO estimates that in Africa, the incidence of urogenital trichomoniasis now exceeds 180 million cases per year [8]. The frequency of the disease is particularly high in the African population (11 to 25% according to the surveys) as well as in the United States in the community of African origin up to 38% of the women who consult are carriers of *Trichomonas vaginalis* [9]. In Marseille (France), out of 346 women who came for consultation at the anti-venereal clinic, 165 were carriers of *Trichomonas vaginalis* [7]. In Senegal, more than 10% of men and 12% of women of childbearing age are victims [4; 8]. In Nigeria, according to OMEREE, 19% of women are carriers of *Trichomonas vaginalis* [10]. In Guinea, the survey carried out by the AIDS project showed that out of 2,948 cervico-vaginal samples, 57.17% of STIs were found, including 8.86% of urogenital *Trichomonas* [1]. At the medico-communal center of Ratoma (Guinea) Sow B reported 33.28% of urogenital trichomoniasis in 604 patients consulted [4].

The objectives of this study were to: calculate the frequency of urogenital trichomoniasis, describe the socio-demographic characteristics and analyze the biological samples.

## 2. Methodology

This was a six (6) month cross-sectional prospective study conducted in the maternity ward (gynecological consultation) and in the laboratory of the Prefectural Hospital of Macenta.

All the women who came for gynecological consultation were included in the study, and among them, all those who presented a laboratory examination report for vaginal secretions and / or urine during the study period.

All the women who came for a gynecological consultation but who had not received a laboratory examination report for vaginal secretions and / or urine and all those already undergoing treatment to imidazoles in the 15 days preceding the survey were not included.

After applying the selection procedure (inclusion and non-inclusion criteria), we obtained a sample of size N = 703 cases. The variables studied were:

- Epidemiological: frequency, age marital status, level of education, socio-professional category,
- Clinical and paraclinical: clinical signs and type of biological fluid

## 3. Results

### 3.1. Frequency

Out of 703 women recruited, we recorded 186 positive cases for *trichomonas vaginalis*, i.e., a frequency of 26.46%.

**Table 1** Frequency urogenital trichomonas

Infection	Number of cases	Percentage
Urogenital trichomonas	186	26.46
Gardnellosis	273	38.83
Urogenital candidiasis	179	25.46
Gonococcal	65	9.25
Total	703	100

### 3.2. Epidemiological characteristics

#### 3.2.1. Age

The 22-27 age group is the most concerned followed by that of 28-33 years with respectively 42, 47% and 29.46%. The average age was 28 years with extremes of 10 years and 46 years old.

#### 3.2.2. Profession

Women in consultation in our series are 39.76% of housewives.

#### 3.2.3. Level of education

The majority of women in consultation had a primary level of education 30, 43% followed by those out of school or 26.49%.

#### 3.2.4. Marital status

The study of this parameter reveals that 28.53% of women were married followed by single 28.28% and widows 16.98%.

### 3.3. Clinical and paraclinical variables

#### 3.3.1. Clinical signs

Half of the patients were asymptomatic followed by those with fetid leucorrhoea 32.61% and fetid pruritus or 25.23%.

#### 3.3.2. Types of biological fluids

The study of this parameter shows high positivity in vaginal secretions, ie 30.41% and 11.41% in urine.

**Table 2** Types of biological fluids

Pathological Products	Number of Patients sampled	Number of positive cases	Percentage
Urine	148	17	11.49
Vaginal secretions	555	169	30.45
Total	703	186	26.46

## 4. Discussion

### 4.1. Frequency

Out of 703 women recruited, we recorded 186 positive cases for trichomonas vaginalis, ie a frequency of 26.46%. This result is close to that reported by Sow B, i.e., 39.76% [4].

### 4.2. Epidemiological characteristics

#### 4.2.1. Age

The 22-27 age group is the most concerned followed by that of 28-33 years with respectively 42%, 47% and 29.46%. The average age was 28 years with extremes of 10 years and 46 years old. This higher rate in women of childbearing age could be justified by their intense sexual activity during this interval. The result recorded in young girls aged 10-15 could probably be due to the use of community showers or the same toilet effects as their parents.

#### 4.2.2. Profession

Women in consultation in our series are 39.76% of housewives.

This higher rate among housewives could be explained by their low level of knowledge of hygiene rules, unlike that of civil servants. Our result is lower than that found by Koné M.G which reports 58.48% of housewife in the maternity ward of the reference health center of the commune I Bamako-Mali [10].

#### 4.2.3. Level of education

The majority of women in consultation had a level of primary education 30, 43% followed by those who did not attend school, i.e. 26.49%. The analysis of this parameter shows that our result is superimposable on that found by R.BenAissa Ham Zanoui et al. or 37.60% among women who had a primary education level [12].

#### 4.2.4. Marital status

The study of this parameter reveals that 28.53% of women were married followed by single 28.28% and widows 16.98%. Dieye. A.M et al. reported in their study 3.6% among sex workers in Dakar [13].

### 4.3. Clinical and paraclinical variables

#### 4.3.1. Clinical signs

Half of the patients were asymptomatic followed by those with fetid leucorrhoea 32.61% and fetid pruritus or 25.23%.

#### 4.3.2. Types of biological fluids

The study of this parameter shows high positivity in vaginal secretions, ie 30.41% and 11.41% in urine. This result is lower than that reported by G. Loua in his study at the Kindia regional hospital, ie 42.17% positivity in vaginal secretions [1].

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## 5. Conclusion

Urogenital trichomoniasis is a sexually transmitted infection, common in women of childbearing or childbearing age. It constitutes a public health problem, one of the control strategies for it involves sensitization and care for women / couples at all levels of the health pyramid.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

None.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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