Research Article ISSN 2639-9342

Gynecology & Reproductive Health

A Case of Maternal Tetanos Following Illegal Induced Abortion

Biaye B[1], Gassama O[2], Niassy AC[1], Faye ME[1], Toure Y[2], Moreira PM[1] and Moreau JC[1]

[1]Aristide Le Dantec Hospital, Gynecologist, Dakar, Senegal.

[2]Nabil Choucair Hospital, Gynecologist, Dakar, Senegal.

*Correspondence:
BIAYE Babacar, Aristide Le Dantec Hospital, Gynecologist, Dakar, Senegal, E-mail: drbabacarbiaye@yahoo.fr.

Received: 24 November 2018; **Accepted:** 16 December 2018

Citation: Biaye B, Gassama O, Niassy AC, et al. A Case of Maternal Tetanos Following Illegal Induced Abortion. Gynecol Reprod Health. 2018; 2(6): 1-3.

ABSTRACT

Maternal tetanus is the development of Clostridium tetani in the maternal organism due to unsanitary practices during childbirth or abortion. It has become a rare condition since the introduction of tetanus toxoid vaccination in pregnant women.

We report a case of genital tetanus in a 32-year-old patient in Nabil Choucair Health Center, Dakar, Senegal.

Through this case, we will present a review of the literature on the epidemiological, clinical, and prognostic aspects of this condition.

Keywords

Obstetric tetanus, Induced illegal abortion.

Introduction

Tetanus is a non-communicable disease due to the action of a toxin secreted by the Clostridium tetani bacillus, naturally present in soil and animal excrement.

Tetanus continues to be a major public health problem in developing countries despite the existence of an effective and available vaccine in the Expanded Program on Immunization (EPI) in Senegal according to the recommendations of the Alma-Ata Conference on Primary Health Care. Post-abortion tetanus occurs after unsafe abortion, whether it is spontaneous or induced [1]. From this genital entry, the bacillus secretes a powerful neurotoxin that causes painful symptoms.

We report the case of a patient who suffered from a tetanus after an induced abortion.

Observation

Miss CG, a 32-year-old patient, Second Gesture, primiparous, single living in the suburbs of Dakar, was referred by the Infectious Diseases Department of the University Hospital of Fann for gynecological examination as part of a research for an acute generalized tetanus. . She was taken in the service on February 20, 2015 for tight trismus, general contracture. The diagnosis of acute generalized tetanus was made without any entryway. On Day 2 of hospitalization, the patient confessed a secondary amenorrhea of two months with notion of abortive maneuver using stem of "African broom" a week before.

A gynecological opinion was requested for tetanus stage 2 score 4 with probably uterine entrance. The speculum examination revealed a gravid-looking cervix with gripping lesions at the anterior lip of the cervix

The Vaginal Touch (TV) revealed a softened cervix with filled vaginal bag asses, a uterus increased in volume like 3 months. An ultrasound had revealed an interrupted pregnancy at 9 weeks of amenorrhea. We performed an ultrasound-guided intra-uterine manual aspiration (MVA) which made it possible to collect 150cc of ovular debris.

The Endocervical specimen isolated an Enterobacter spp susceptible to ceftriaxone, and amikacin. We noted a good clinical course after 10 days of hospitalization under antibiotics (ceftriaxone 1g / D), and anti-tetanus serum based treatment, and intensive care.

Discussion

Epidemiological aspects

Tetanus is still prevalent in the world with 1 million deaths per year. It is more common among the elderly (78%), especially among women (87%), its incidence in Senegal is 10-50 / 10,000 inhabitants.

Post abortion tetanus is part of the nosological framework of obstetric tetanus, which also includes postpartum tetanus.

In Senegal, according to a study carried out by the Department of Infectious Diseases at Fann University Hospital, the prevalence of obstetric tetanus is 1.78% of general tetanus with an average annual frequency of 3.5 cases [2]. Among these obstetric tetanus 90.4% occurred in the postpartum and 9.52% in the post-abortion [2].

Most studies have shown that post-abortion tetanus occurs most often in unmarried young women during periods of genital activity living in poor socio-economic conditions, unvaccinated or poorly vaccinated [2,3,4]. The difficulties to access to family planning services, the fear of stigmatization and the legalization knowing that voluntary abortion is illegal in Senegal is the main reason why girls resort to a induced abortion which is most often performed by unskilled personnel.

Etiopthogeny

Tetanus bacillus is a ubiquitous germ. Spores are forms of resistance and inoculation of the disease. These are resistant to a large number of disinfectants. They are sensitive to iodine derivatives, dakin, glutaraldehyde, hydrogen peroxide and heat (121°C for 15 minutes) [5]. The reservoir is telluric (soil), digestive tubes of herbivorous animals and also of man (40%). The disease is contacted in the female having genital activity, unvaccinated or poorly vaccinated by the introduction of spores during a break in the genital mucosa.

From the entrance gate the secret bacillus of tetanus toxin tetanospasmine which is a powerful toxin with a lethal dose of 2.5ng / kg. This toxin travels along the motor neuron to reach the substance of the marrow and brainstem. It causes the inhibitory rise of the inhibitory interneuron at the pre-synaptic level, which leads to the simultaneous contracture of the agonist and antagonist muscles [3,5].

Diagnostic aspects

Tetanus usually manifests as trismus, contracture, paroxysm. In the context of post-abortion tetanus, speculum examination may indicate prehension lesions that may be visible on speculum examination [6]. The evolution may be associated with genital complications (haemorrhage, infection). During but also mechanical (laryngeal spasm, chest blockage, fracture, vertebral compression, pressure ulcers ...), nosocomial infections, dehydration, and undernutrition [7].

Aspects prognosis [2-4]

The prognosis is established by the Dakar score.

It is established 48 hours after the onset of the disease. It allows establishing a scale of gravity.
Score 0-1 = Tetanus (case-fatality rate <10%).
Score 2-3 = Moderate Tetanus (case-fatality rate 10-20%).
Score 3-6 = Acute and severe tetanus (case-fatality rate 20-90%).

Prognostic factors		1 point	0 point
Incubation		< 7 days	≥ 7 days
Invasion		< 2 days	≥ 2 days
Entrance doors		Ombilicus, utérus Open fracture surgery Burn, I.M.	Others or unknown
Paroxysms		Present	Absent
Rectal temperature		< $38^{o}4$	≥ $38^{o}4$
Pulse	Adult	< 120/mn	≥ 120/mn
	New born	< 150	≥ 150

Table 1: Dakar Score (1975).

In our patient, the score was 4. The evolution was enameled with dehydration and undernutrition, which have been curbed, by parenteral nutrition and undernutrition 3 days later.

Therapeutic aspects

The management of all cases of tetanus, especially those with a gynecological entry door, has a curative and prophylactic aspect.

Curative treatment [1,2,5]:

- All tetanus cases should be hospitalized and admitted to intensive care away from all stimuli (patient quiet, room low noise, low light or dim light ...).
- Treatment of the entrance door: extraction of foreign bodies, disinfection care (vulvovaginal toilet) once a day.
- Tetratic Serotherapy (SAT) or Gamma Tetanus 250 IU suboccipital route.
- First vaccination dose on the day of admission, continue vaccination at the exit.
- Antibiotic therapy for 7-10 days parenterally (IM or IV).
- Rehydration and nutritional rehabilitation as soon as possible.
- Prophylaxis thromboembolism and nursing.

Prevention is based on vaccination, which is the main element of tetanus toxoid prophylaxis (formol + heat), alone or in combination with other vaccine antigens (poliomyelitis, diphtheria, whooping cough, TAB, etc.). This vaccination is compulsory in Senegal and in most countries of the world, from the age of 6 weeks and before 12 months, in the military and in certain professions. The vaccination protocol is as follows: 3 doses in SC or IM at least 4 weeks apart, 1 to 1 year, the second at the age of 5 and the other reminders every 10 years. There is no contraindication to vaccination even in immunocompromised patients [8-10].

Conclusion

Obstetric tetanus is a public health problem in developing countries. Post-abortion tetanus can be reduced or eradicated by fighting against illegal induced abortions, by an easier access to contraception means, by legalizing abortion and by the vaccination of all women in childbearing age against tetanus.

References

1. Bennet MJ. Postabortal and post partum tetanus. A review of 19 cases. S Afr Med J. 1997; 2: 557-560.

2. Ndour CT, Soumaré M, Diop BM, et al. Le tétanos à porte d'entrée obstétricale à Dakar: aspects épidémiologique et pronostiques à propos de 21 cas observés à la clinique des maladies infectieuse du CHU de Dakar. Med Mal Infect. 2002; 32: 399-404.
3. Manga NM, Dia NM, Ndour CT, et al. Tetanos néonatal et de la femme en âge de procréer à la clinique des maladies infectieuses de dakar. Med Mal Infect. 2009; 39: 901-905.
4. Seydi M, Soumaré M, Gbanga Ngai E, et al. Aspects actuel du tétanos de l'enfant et de l'adulte à Dakar. Med Mal Infect. 2005; 35: 28-32.
5. Hassen W, Freney J. Le tétanos: hitoire d'une maladie redoutée et celle du bacille de nicolaier. Lyon Pharma. 2001; 52: 34-81.
6. Hountondji A, Monteiro B, Zohoun T, et al. Morbidité et mortalité hospitaliére par tétanos chez l' adulte à cotonou. Med Afr Nre. 1988; 35: 716-723.
7. Yadav YR, Kala PC, Yadav S. Respiratory complications in tetanus. Indian J Med Sci. 1989; 43: 317-322.
8. Fauveau V, Mamdani M, Steinglass R, et al. Maternaltetnus: magnitude epidemilogy and potential controlmeasures. Int J Gynaecol Obstet. 1993; 40: 3-12.
9. Ministère de la Santé et de l'Action Sociale du Sénégal. Plan national de Développement Sanitaire et Social (PNDS, 1998-2007). 1997; 91.
10. Patel JC, Mehta BC. Tetanus: study of 8697 cases. Indian J Med Sci. 1999; 53: 393-401.

© 2018 Biaye B, et al. This article is distributed under the terms of the Creative Commons Attribution 4.0 International License