

About the treatment of gonorrhoea in the former Soviet Union

Sergei V. Jargin, M.D.¹

¹ Peoples' Friendship University of Russia, Moscow, Russia

Citation: Jargin SV. About the treatment of gonorrhoea in the former Soviet Union [Letter]. *Dermatol Pract Conc.* 2012;2(3):12. <http://dx.doi.org/10.5826/dpc.0203a12>.

Copyright: ©2012 Jargin. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Corresponding author: Sergei V. Jargin, M.D., Clementovski per 6-82, 115184 Moscow, Russia. Email: sjargin@mail.ru.

Report

Some aspects of gonorrhoea (Gn) treatment in the former Soviet Union are discussed in this letter in the example of three typical cases from the 1980s. The facts follow:

Case 1. A lawyer, about 30 years old, who spent much time on study and work, was infected with Gn. In compliance with the law at the time, he went to a dermatovenereological dispensary (prevention and treatment center), where he was registered and treated according to the instructions issued by the health care authorities [1,2]. The patient said that the treatment had been lengthy and unpleasant and subsequently would never return to the dispensary.

Case 2. A bachelor, about 35 years old, awarded himself a next highest military rank whenever he contracted Gn; in this way he became a generalissimo (which demonstrates widespread irresponsibility: the patient was, in fact, proud of his "career"). He never visited the dermatovenereological dispensary and treated himself with intramuscular injections of Bicillin (benzathine benzylpenicillin).

High-risk groups were informed about methods applied in the dispensaries and avoided them. They also had general knowledge about how to treat Gn with antibiotics; more responsible individuals administered themselves regular courses of Bicillin injections, but others treated themselves incompletely and continued spreading infection. These cases show that the society de facto permitted many infected people, including those from higher classes, to spread sexually transmitted infections (STI).

Case 3. A female student was infected with Gn in a students' dormitory. Initially, no symptoms were noticed. Shortly thereafter, she met her future husband and a week later was admitted to a gynecology department with a diagnosis of "adnexitis"; while the fiancée developed an acute urethritis with a massive discharge of creamy pus. An acquainted physician gave them several tablets of an overseas antibiotic (unavailable in Russian hospitals at that time), which ended their disease; there were no relapses. Bacteriology laboratories in hospitals were sometimes unreliable, which allowed the couple to avoid some of the procedures described below.

Following are several citations from official manuals legally in force at that time [1,2] and from standard publications such as the *Medical Encyclopedia* [3] and the *Manual of Dermatovenereology* [4]: "If inflammation persists 5-7 days after a course of antibiotic therapy, even if gonococci have disappeared from the urethral smears, topical therapy is recommended." [3]

In the introductory part of the latest manual available [1], it is stated that topical therapy was indicated only in case of intolerance of antibiotics, but further in the text it recommended them for torpid and chronic Gn, and sexual contacts were to be treated in the same way as the patients with chronic Gn, even if no gonococci had been found in the smears [1].

Some earlier handbooks recommended topical treatment for all patients with Gn [5]. Among other things, topical therapy included the following: In case of a "soft" infiltration, 0.25-1 % silver nitrate solution were instilled into the ure-

thra; focal lesions were treated with an additional 10-20% silver nitrate solution via urethroscope. For “desquamative” urethritis, instillations of zinc or lead sulphate were recommended. For urethral adenitis: swabbing of the urethra up to the external sphincter with argentum proteinicum and glycerol was recommended. Bouginage and swabbing were recommended both for a “soft” and “firm” infiltration [3].

Repeated tests of cure, administered to all patients, included methods of provocation. The rationale behind the provocation was as follows: “Gonococci are difficult to detect bacterioscopically, (while mechanical and chemical) irritation of tissues can help to reveal the infection in hidden places.” [2] Chemical provocations in men included instillations into the urethra of 0.5 % silver nitrate solution and in women, treatment of the urethra with 1-2%, and of the cervical canal with 2-5% silver nitrate solution or Lugol’s iodine solution with glycerol. Mechanical provocation included bouginage or urethroscopy with urethral massage: “In protracted cases, it is advisable to induce irritation of the urethral mucosa by a massage on a bougie or urethroscope.” [2] If symptoms reappeared after the provocation, the treatment was repeated. A combined provocation was performed 7-10 days after the last treatment. Urethral discharge was examined 24, 48 and 72 hours after the provocation and if there was no discharge, secretions from the prostate and seminal vesicles were examined. If no gonococci were found after the first provocation, a combined provocation including urethroscopy was repeated one month later. The urethroscopy (with a dry urethroscope, both for men and women) was stressed as necessary because pathological changes of the mucosa and urethral glands could persist in the absence of symptoms: “Urethroscopy enables the determination of the character of inflammatory changes after the disappearance of gonococci and of acute clinical manifestations, which is of importance for the topical treatment.” [2] The following measures, among others, were recommended for Gn in women: instillations into the urethra of 1% silver nitrate solution; urethral massage for chronic urethritis, electrocoagulation or cauterization of inflamed periurethral glands by a silver nitrate crystal fixed on a urethroscope. A “follicular” erosion of the ectocervix would be repeatedly coagulated by potassium permanganate crystals. It should be commented that coagulation or cryotherapy have been usual treatment modalities for “pseudo-erosion” (i.e., endocervical ectopia or ectropion) independently of the presence of epithelial dysplasia [6]. For longstanding cervical erosions, electrocoagulation with subsequent insertion into the vagina for 24 hours of a swab with glycerol and ichthammol (sulfonated bitumen from shale oil) was recommended. If no gonococci were found bacterioscopically in the smears taken during the patient’s first visit, a provocation was recommended by means of an instillation of silver nitrate solu-

tion into the urethra and the cervical canal [7]. The test of cure included urethroscopy [1]. As a test of cure for women, a combined provocation 7-10 days after the treatment was applied with a repeat treatment during the next menstrual period, and then again after 2-3 periods. If clinical symptoms were persisting, but no gonococci were found, the same treatment as for chronic Gn was recommended [7]. As a consequence of this approach, non-gonococcal inflammatory conditions were sometimes treated by the topical procedures (among them must have been cases of chlamydia infection because of its relatively high incidence) [8]. If no clinical symptoms were present, and no gonococci were found at two months after the last treatment, a registration with the dispensary is cancelled.

The methods of topical therapy and provocations, inherited from the pre-antibiotic era, were mentioned neither in foreign handbooks of that time [9,10] nor in review articles [11-14]; while bouginage was recommended only for strictures [10]. Nevertheless, topical therapy and repeated tests of cure were probably useful in some cases because of the limited availability of modern antibiotics in the former Soviet Union. For a pathologist, it is not entirely clear which morphological substrate corresponds to the “firm infiltration,” where bouginage was strongly recommended [1,3]; but it is obvious that inflamed and edematous mucosa can be traumatized, which might contribute to scarring and formation of strictures. At the same time, diagnostic tests for non-gonococcal urethritis, such as direct immunofluorescence for chlamydia infection, were unavailable to the public until the late 1980s or the 1990s. The outdated approach has persisted partly due to the limited access to foreign professional literature [15].

The treatment of venereal diseases, including gonorrhoea, was under strict official control in the USSR. Challenging the guidelines, that had remained unchanged for a long time, was equivalent to challenging legal instructions and was difficult. Some STI experts understood that the instructions were obsolete. Others witness that the guidelines were not always strictly adhered to; in other words, some personal judgment was involved. Apparently, a psychological mechanism, including conscious or subconscious ideation of punishment, on the part of medical personnel possibly fueled in some cases by personal frustrations, obesity etc., played a role in it. Some patients witnessed that abortions and gynecological manipulations, especially in women considered to be socially unprotected or “immoral,” had been quite unpleasant. There are no reliable statistics, but the abortion rate in the former Soviet Union was reported to be the highest in the world, which was caused not only by insufficient availability of modern contraception [16] but also by irresponsibility of some men (the author of this letter not excluded, which he today sincerely regrets). Alcohol

misuse was a contributing factor [17]. Of oral contraceptives, mainly Infecundin and Bisecurin (both produced in Hungary), were known in the 1980s; these pills required a prescription and were used infrequently. Condoms were of poor quality then: imported ones were scarce, while the Soviet-made condoms were notoriously thick and at the same time tore easily. There may have been a policy in place aimed at an increase of the birth rate [18]. Furthermore, as mentioned above, cervical “pseudo-erosions” (endocervical ectopia, ectropion), independent of the presence of epithelial dysplasia, have been treated with electrocoagulation. This practice is at variance with scientific evidence that does not support the hypothesis that coagulation of an ectopy provides protection against cervical cancer [19].

Today, however, the attitude is changing. The instructions [1] are still valid, but at least in central dermato-venereology dispensaries in Moscow mechanical provocations are no longer in use and instillations are performed only occasionally. Tests for chlamydia and other pathogens are available today. Some private institutions offer modern diagnostics and treatment. In the recently edited Russian-language manuals, antibiotic therapy of Gn is broadly discussed, while the provocations and topical treatment are not mentioned at all [20,21]. The future is therefore optimistic: the growing Russian economy today enables access to modern equipment and new methods of treatment, and broadening international cooperation has attracted foreign expertise into the country.

Summary

The treatment of gonorrhea in the former Soviet Union is discussed in this report with the examples of three typical cases from the 1980s. Some outdated methods of topical treatment and provocation, not used in other countries at that time, are listed. Being aware of lengthy and unpleasant treatment methods, high-risk groups avoided the government-run dermato-venereological dispensaries (prevention and treatment centers) and often practiced self-treatment, which, in some cases, contributed to the spread of STI. The future is therefore optimistic: the growing Russian economy today enables access to modern equipment and new methods of treatment, and broadening international cooperation has attracted foreign expertise into the country.

References

1. Ministry of Health of the USSR. [Instruction for treatment and prevention of gonorrhoea]. Moscow, 1988.
2. Ministry of Health of the Russian Federation. [Treatment and prevention of gonorrhoea. Methodical recommendations]. Moscow, 1993.
3. Porudominsky IM, Ilyin II, Ovchinnikov NM, et al. Gonorrhoea. In: [Large Medical Encyclopaedia. 3rd ed.] Moscow: Soviet Encyclopaedia, vol. 6]. 1977;324-36.
4. Rodionov AI. [Manual on the Skin and Sexually Transmitted Diseases]. Moscow: Piter, 2005.
5. Mavrov II. [Treatment and Prevention of Gonococcal Infection]. Kiev: Zdorov'ia, 1984.
6. Bodiazhina VI. Cervical erosion. In: [Large Medical Encyclopaedia, vol 28. 3rd ed.]. Moscow: Soviet Encyclopaedia, 1986;343-4.
7. Batkaev EA. [Gonorrhoea in Women]. Moscow: Central Order of Lenin Advanced Training Medical Institute, 1986.
8. White C. Sexually transmitted diseases continue to rise. BMJ. 2004;329:249.
9. Berger RE. Sexually transmitted diseases: the classic diseases. In: Walsh PC, Retik AB, Vaughan ED, Wein AJ, eds. *Campbell's Urology*. 7th ed. Philadelphia: Saunders, 1998:663-683.
10. Tanagho EA, McAninch JW. *Smiths Urologie*. Berlin: Springer, 1988.
11. Willcox RR. A survey of problems in the antibiotic treatment of gonorrhoea. With special reference to South-East Asia. Br J Vener Dis. 1970;46(3):217-42.
12. Welch RD, Fletcher DJ, Nelson JH, Blackwell M, Ferguson J. Current treatment 160 approaches for gonorrhoea in men: two for the price of one. Mil Med. 1984;149(7):404-7.
13. Bowie WR. Approach to men with urethritis and urologic complications of sexually transmitted diseases. Med Clin North Am. 1990; 74:1543-57.
14. Carne CA. Epidemiological treatment and tests of cure in gonococcal infection: evidence for value. Genitourin Med. 1997;73(1):12-5.
15. Jargin SV. The state of medical libraries in the former Soviet Union. Health Info Libr J. 2010;27(3):244-8.
16. Popov AA, Visser AP, Ketting E. Contraceptive knowledge, attitudes, and practice in Russia during the 1980s. Stud Fam Plann. 1993;24(4):227-35.
17. Jargin SV. On the causes of alcoholism in the former Soviet Union. Alcohol Alcohol. 2010;45(1):104-5.
18. Jargin SV. Where have all the flowers gone? S Afr Med J. 2011;101(8):494.
19. Machado Junior LC, Dalmaso AS, Carvalho HB. Evidence for benefits from treating cervical ectopy: literature review. Sao Paulo Med J. 2008;126(2):132-9.
20. Sokolovsky EV, Savichev AM, Kisina VI, et al. [Gonococcal Infection. Treatment. Recommendations for Physicians]. Saint-Petersburg: Foliant, 2008.
21. Molochkov VA, Gushchin AE. [Gonorrhoea and Associated Infections. A Manual for Physicians]. Moscow: Geotar-med, 2006.