

Cervical Ectopy: Selected Aspects of Diagnostics and Therapy

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Abstract

This is a narrative review based largely on the Russian literature. Some guidelines have remained without due commentaries, so that a persistence of outdated methods is not excluded. An example of such persistence is the ablative treatment of cervical ectopy regardless of the presence of cell atypia. Cervical ectopy or ectropion has been called in Russia pseudo-erosion; the term ectropion being used for the cervix eversion after delivery. Columnar epithelium may extend from the endocervical canal onto the exocervix, a condition known as eversion or ectopy, considered to be physiological. In Russia, cervical ectopy was regarded to be precancerous or predisposing to cancer. Cylindrical endocervical-type epithelium and mucous glands within the ectopy were designated as pathological tissue that must be removed. Cervical ectopies were found at mass examinations and treated by electro- or thermocautery. Ablative treatments of cervical ectopy are advertised and recommended by some contemporary literature; an overview is provided here. At the same time, the Papanicolaou test has been performed infrequently, sometimes being not up to the quality standards. There is no nationwide program for prevention of cervical cancer, which is diagnosed relatively late. Factors contributing to the application of invasive procedures with questionable indications included the partial isolation from the international professional community, paternalistic attitude to patients, insufficient consideration of the principles of informed consent and professional autonomy.

Keywords: cervical ectopy; ectropion; cytology; papanicolaou test; medical ethics

Introduction

Factors contributing to the persistence of suboptimal practices in Russian Federation (RF) include a partial isolation from the international professional community, shortages of medical education, unavailability of many internationally used handbooks [1,2]. Admittedly, foreign literature is available on the Internet today, many guidelines being adjusted to international standards. The PubMed is free across the globe. Some new handbooks are available through libraries in electronic form [3,4]. Suboptimal practices have been applied as per instructions by healthcare authorities and leading experts' publications. The lacking professional autonomy has contributed to the persistence of outdated and suboptimal methods [5]. In conditions of paternalism, misinformation and persuasion of patients are regarded to be permissible [6]. As far as we know, the Soviet and present rulers, the party and military functionaries, did not allow the use of invasive procedures without indications on themselves and their relatives, did not treat gonorrhea by tamponade and bougienage of the urethra [7]; alcoholics from their milieu have not been compulsorily treated by drip infusions being infected with viral hepatitis [8]. As for the medical personnel, it is unlikely that they cauterized cervical ectopies

(discussed below) or performed Halstead mastectomy on their relatives [9]. This implies that there has been conscious infliction of bodily harm. Finally, the obstacles to the importation of drugs and medical equipment should be mentioned. Domestic products are promoted sometimes despite suboptimal quality and possible counterfeiting.

Methods

This is a narrative review based largely on the Russian literature. The search was performed on the PubMed, in libraries and the electronic database eLibrary.ru. The data from the literature have been reviewed on the basis of the author's observations since the 1970s, comparing the practice in RF with that in European countries [10]. It should be mentioned in this connection that, unlike other countries, local public libraries are rarely used in RF and usually contain no professional medical literature. Medical libraries are hindered from using by the general public by technical difficulties [11].

Focused review

Some guidelines have remained without due commentaries, so that a persistence of outdated methods is not excluded. An example of such persistence is the ablative treatment of cervical ectopy,

regardless of the presence of epithelial dysplasia, routinely applied and advertized in RF. It should be commented that cervical ectopy or ectropion has been called in Russia pseudo-erosion (colloquially erosion), and previously also endocervicosis [12-14], which disagrees with the internationally used terminology. The term ectropion has mainly been used for the cervix eversion after delivery. In some newer publications, the terminology is adjusted to the international one [15].

In many adolescents and women in the reproductive period, especially with oral contraceptive use, the mucin-secreting columnar epithelium of the endocervix is present on the cervical portio, forming the endocervical ectropion or ectopy, which is considered physiological. After menopause, the transformation zone usually recedes into the endocervical canal [16-18]. Being asymptomatic in most cases, cervical ectropion is diagnosed during a routine pelvic examination. The ectopy requires no treatment unless the symptoms are affecting the patient's daily life [18]. Of note, it is not always clear whether the symptoms are caused by the ectopy per se or by concomitant cervicitis/vaginitis. Cryotherapy for symptomatic cervical ectopy was applied in Iran [19]. The ultrasound therapy or microwave coagulation has been used in China [20,21]. The stated purpose was the induction of necrosis and exfoliation of columnar cells with subsequent repair by squamous epithelium. This is expected to reduce the probability of abnormal metaplasia and infection. A review from China concluded that it is not clear whether the coagulation has any benefit for the patients [20].

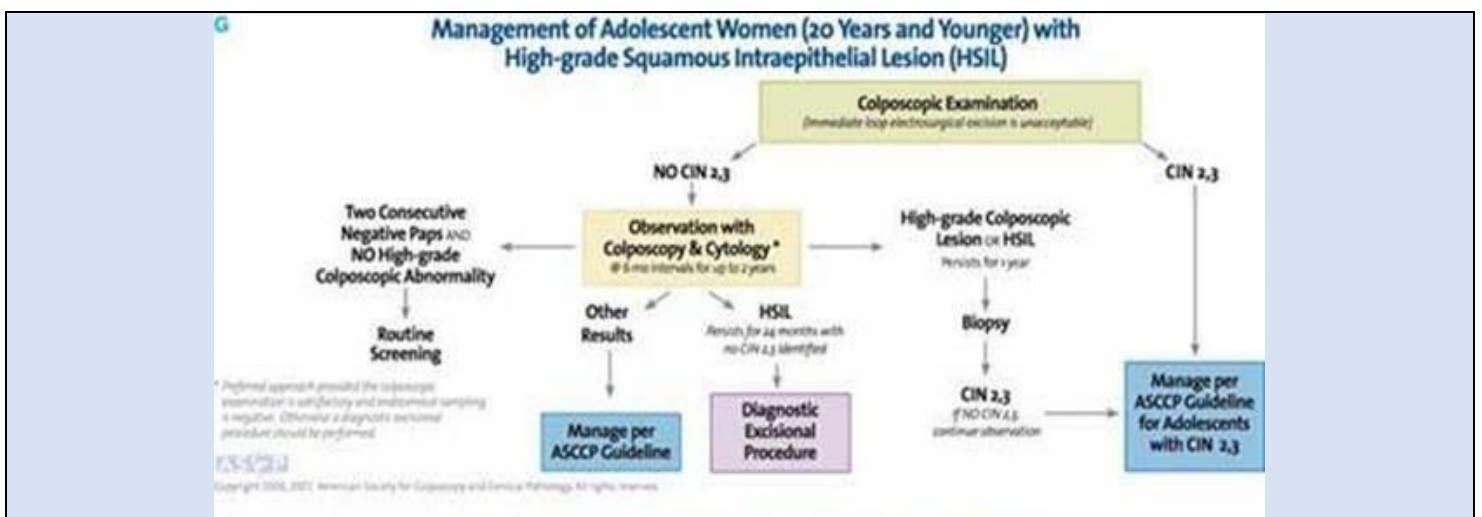
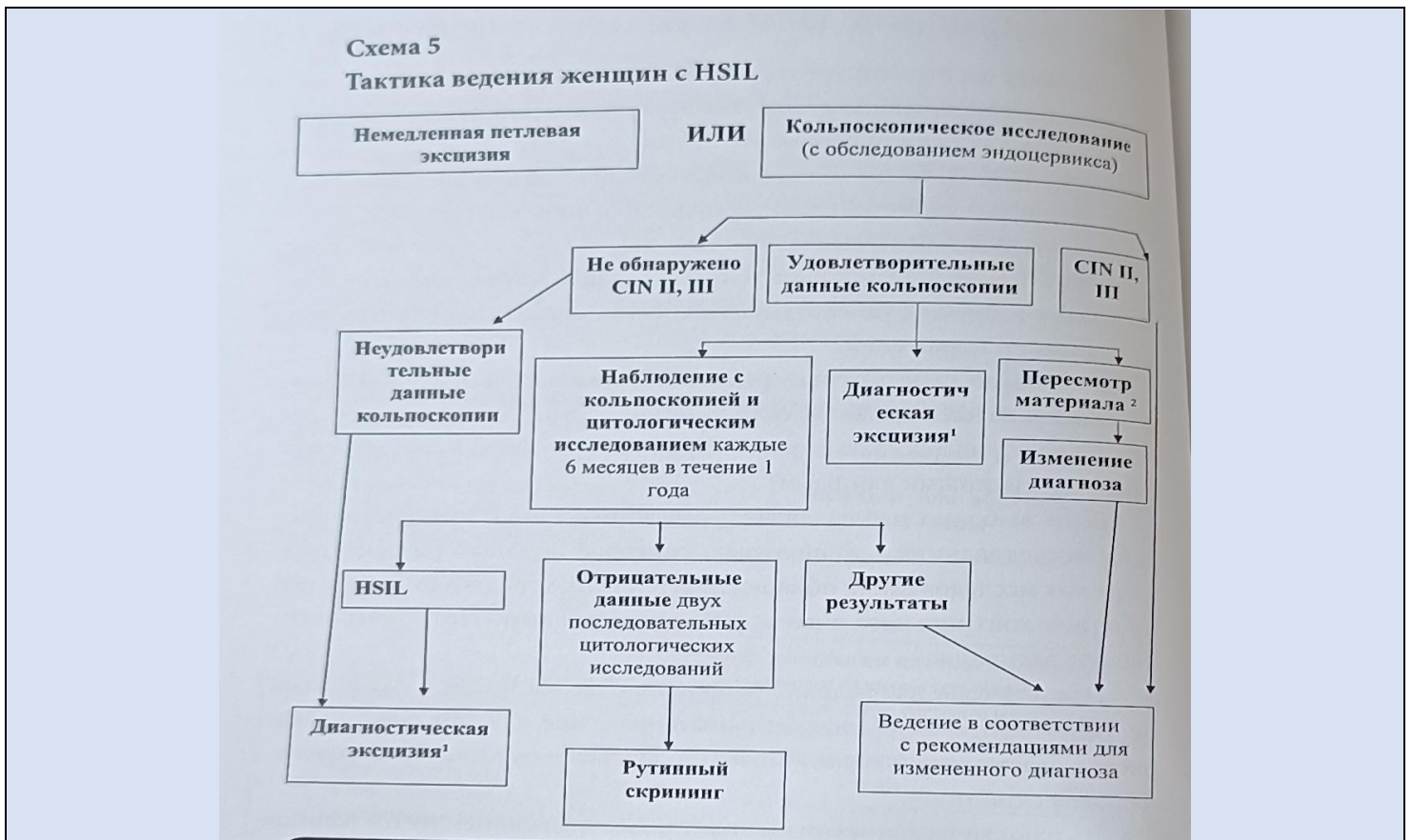
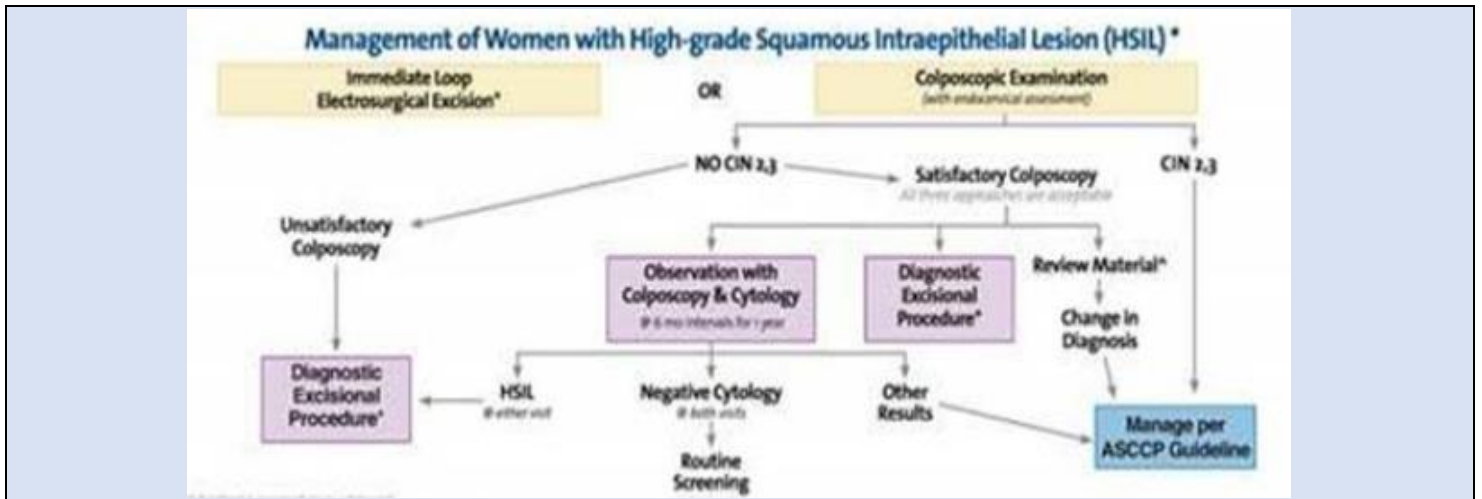
In the former Soviet Union, cervical ectopy was regarded to be precancerous or predisposing to cancer [22-26]. It was claimed that 3.6-9.0% of ectopy cases evolve into cancer [27], which is not confirmed by the international literature. Cylindrical endocervical-type epithelium and mucous glands within the ectopy were designated as "pathological tissue" that must be removed [28]. It was also speculated that cervical pseudo-erosions contribute to infertility and complications of pregnancy [29,30], which is not confirmed by the modern literature [18].

Cervical ectopies were found at mass examinations and treated by electro- or thermocautery [31,32]. This occurred in accordance with the Soviet-time concept

of prophylaxis priority [22]. Medical examinations (so-called dispenserizations) were performed at many factories, institutions and agricultural cooperatives (kolkhoz) [32]. Cervical smears were taken predominantly for bacteriological diagnosis. The coverage of the population by dispenserizations has decreased since the Soviet time. There is no nationwide program for prevention of cervical cancer, which is detected in RF relatively late [33]. Reportedly, 32.6% of cervical cancer cases (15-50% in different provinces) were diagnosed at a late stage in 2021 [34]. It was recommended to start the treatment of pseudo-erosions as early as possible. Large lesions were to be treated by "diathermoconization" using an electrocautery electrode [23,25,35], a procedure known to be associated with complications.

Ablative treatments of cervical ectopy are advertized and recommended by some contemporary Russian literature; the images and more references are in [36]. Relapsing endocervical ectopy without epithelial dysplasia is presented as an indication for cryotherapy in a recent monograph [15]. Other experts recommended laser treatment, loop electrosurgical excision procedure (LEEP), argon plasma coagulation and/or cryotherapy [37-43]. Some medical practices possess only one device, which is used not always in accordance with evidence-based indications.

For young nulliparae an ablation of ectopic cylindrical epithelium by acid-containing preparations [26,39,44], laser treatment [45] or cryotherapy [46-48] has been recommended. As per the "National Manual" and other publications, excisional therapy is indicated to all patients with ectropion [49-51]. For leukoplakia (cervical hyperkeratosis without cell atypia), electrocautery, LEEP, laser-, cryotherapy or argon plasma coagulation has been recommended [15,38,43,49,51,52]. Ablative methods have been used also in precancerous lesions [43,50-54], which may be suboptimal compared to conization because elimination of a lesion in toto, in particular, from the cervical canal, is not always ensured; while the tissue destruction impedes histological evaluation. Indications are beyond the scope of this article; the treatment options are presented in handbooks [2,3]. Some recent Russian editions borrowed recommendations and algorithms from the international literature without references [55,56] (Figure. 1).



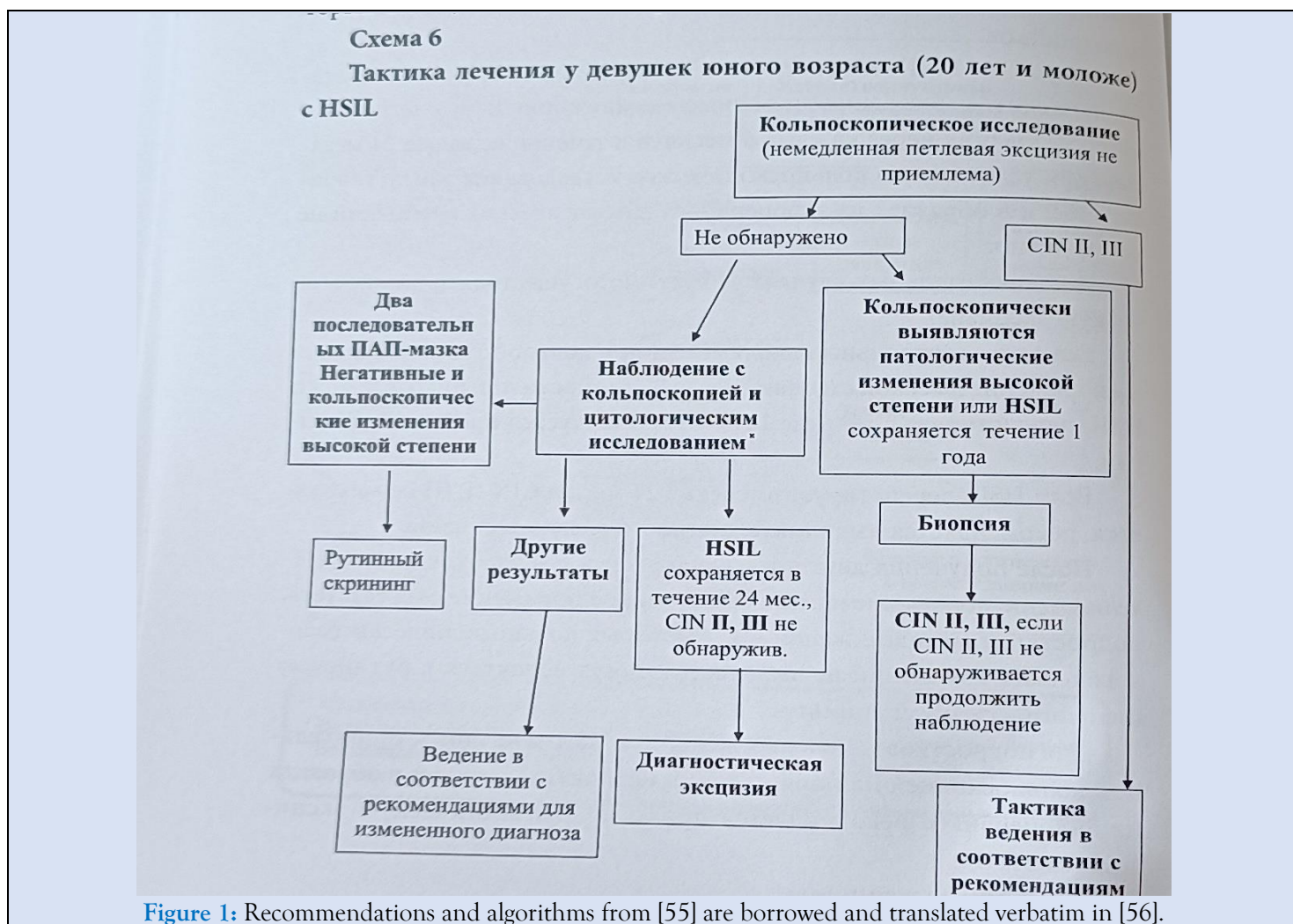


Figure 1: Recommendations and algorithms from [55] are borrowed and translated verbatim in [56].

At the same time, the Papanicolaou test has been performed in RF infrequently. The Romanovski-Giemsa was sometimes used instead of the Papanicolaou stain; the quality of smears being far from perfect. There are no cytology technologists to perform initial screening of smears in many institutions. Moreover, some cyto- and histological reports were misinterpreted by clinicians. For example, pathologists were admonished against using the term “metaplasia” in their reports as the patients were remitted to cancer-prevention centers (oncologic dispensaries). Apparently, the cause was not only lack of knowledge: stressed patients, needlessly remitted to the oncologic institutions, were easier to manipulate towards paid services. Gynecology as a medical specialty has been notorious since the Soviet era because of high unofficial incomes, striven for by certain students.

Many physicians realized the obsolescence of instructions and made exceptions. Vaguely formulated recommendations in some manuals left space for individual judgment. Apparently, ideation

of punishment coupled with irresponsibility has played a role. According to witnesses, gynecological manipulations, including coagulation of ectopy, were sometimes quite unpleasant, especially in women seen as socially unprotected or “immoral” [7]. It was claimed that promiscuity and sexually transmitted infections are predisposing factors [27,47,51], reportedly coinciding with cervical ectopy in 41.9% of cases [27], which is generally not confirmed by the literature.

Cytologists and pathologists belong in RF to different medical specialties (laboratory medicine and pathology); being often located in different departments. Not all cytologists find time to compare their reports with histopathological diagnoses, while histological and cytological specimens are hardly ever confronted. In other countries it occurs routinely as cytology and histology is performed by the same experts or teams. Comparisons of cytological and histological specimens are important because of many inconclusive reports in cytology, when only a suspicion can be expressed. A high level of false-

negativity in cervical cytology has been noticed [34]. Apparently, the insufficient reliability of cytology is one of the reasons of a relatively frequent use of cervix biopsy in RF. Health care authorities plan to introduce screening for cervical cancer, but it will be not easy for lack of qualified cytotechnologists for pre-screening of the specimens. High quality of cyto- and histological diagnostics is essential for the adequate management of cervical intraepithelial neoplasia and related lesions.

Conclusion

Factors contributing to the application of invasive procedures with questionable indications have included the partial isolation from the international professional community, insufficient consideration of the principles of professional autonomy, informed consent and scientific polemics, as well as paternalistic attitude to patients. The isolation and lacking international coordination of medical studies may lead to persistence of suboptimal and outdated methods, in particular, invasive procedures without sufficient indications. Considering shortcomings of the practice, research and education, governmental directives and increase in funding are unlikely to be a solution. Measures for improvement of the healthcare in RF must include participation of authorized foreign advisors.

Declarations

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Conflict of interest

The author declares no conflict of interest.

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