What is the real impact of the change in the screening strategy for cervical cancer in Brazil?

Qual o real impacto da mudança na estratégia de rastreamento do câncer de colo do útero no Brasil?

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On March 11, 2024, the Brazilian Ministry of Health approved the HPV-DNA test for cervical cancer screening through the National Commission for the Incorporation of Technologies in the Unified Health System (CONITEC)[1].

This cancer has a persistent incidence in Brazil, with around 17,000 new cases each year and approximately 4,000 deaths annually[2]. To date, the Pap test has still been the screening strategy. Although the test has worked in many countries, it is considered a method of insufficient sensitivity and whose accuracy is professionally dependent. The HPV-DNA test, on the other hand, has high sensitivity and allows the possibility of self-collection. Some countries have migrated from screening to HPV tests, preferably with genotyping, leaving cytology as triage or even abandoned[3].

While the change of screening strategy is being discussed, the World Health Organization launched in 2020 The Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem with the challenge of eliminating cervical cancer in all countries. The goal would be to reach less than 5 cases per 100,000 women by 2030. The objectives are 90% HPV vaccination coverage in girls up to 15 years of age, screening with a high-performance test, such as HPV-DNA testing, in more than 70% of women who should be screened at the ages of 35 and 45 years, and finally, to ensure adequate follow-up in more than 90% of HPV-positive women with HPV-associated diseases[4].

Immediately, some questions come to mind. What will the strategy be in Brazil when we migrate to HPV DNA testing? Will there be an effective change in the number of cervical cancers? Undoubtedly, the challenge is by no means trivial. There are many tests available. What will be the criterion for choosing the test? Which genotypes will be identified? Is it consistent with the local reality?

At the same time, we must remember that, with doubts about its effectiveness, cytology already has a structure, the dismantling of which can cause significant damage. If we think of reflex cytology for HPV-positive cases, it will not be possible in the case of self-collection because there is no sampling of the squamocolumnar junction. Thus, we would have to rely on places with updated structures for cytology collection and processing, preferably in liquid media. If HPV-DNA is collected by a professional directly from the uterine cervix, reflex cytology would be done from the initial sample, but again, laboratories need to be equipped with the required tools to make the slides. The advantage of having material in a liquid medium would be the search for other infections using molecular biology techniques.

Another concern is to know which genotypes should be used as colposcopy and/or reflex cytology indicators. There is a tendency to refer for colposcopy only cases in which HPV 16 and HPV 18 are identified[5,6]. However, there is already significant research demonstrating a strong association of types 31, 33, and 45 with high-grade squamous intraepithelial lesions and cancer[7]. Wouldn't it be prudent to include positive cases for all five HPV types as indicators of immediate colposcopy? It is considered that in the age group chosen for screening with molecular biology methods (over 30 years), about 20% of the cases would be positive for high-risk HPV, and approximately 8% would have the types of HPV mentioned[8,9]. The cost-effectiveness analysis would be interesting in evaluating the possibility of having HPV16, 18, 31, 33, and 45 positive cases as an indication for colposcopy[10].

It is worth mentioning that HPV vaccination in developed countries, which use molecular biology screening, occurs with the nonavalent vaccine 6, 11, 16, 18, 31, 33, 45, 52, 58. Will the vaccine strategy change? The type of vaccine made available in the public network and the expansion of the application to age groups, for example, for 2024/25, for men and women up to 16 years of age, can offer, as has happened in several countries, a decrease in the burden of diseases caused by HPV, including cancer of the cervix, vulva, vagina, anus, head and neck, penis. Increasing vaccination coverage in men, with the most efficient vaccine in the world today, 9vHPV will undoubtedly impact the contamination of women by HPV.

Something that should also be taken into account is whether there is any point in having high-performance tests, thinking in a population way, without adequate coverage? In other words, will the results hardly change without organized screening? Perhaps the first step towards successful screening is to stop the opportunistic strategy and start having an organized screening in Brazil. In this way, the HPV-DNA test will be able to bring all the expected results.

Remember that an organized screening does not only start with the screening test but eventually goes through a triage test, a good diagnostic test (colposcopy and biopsy), treatment, and follow-up. The structure must have a database with a record of the entire population eligible for the test, facilitate access to screening and diagnosis, and provide adequate follow-up with treatment and post-treatment follow-up.

We hope that Brazil will change the key. I hope we no longer have so many women dying from preventable cancer. But, realistically,

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a test, no matter how high it performs, should not change reality if there is no political and social commitment to carry out an organized national screening, giving access to each of the methods necessary for the diagnosis and treatment of pre-invasive and invasive lesions of the uterine cervix. The participation of the three political levels, municipality, state, and federal government, will be essential to achieve success, which is so distant.

It is important to consider whether, without a good organization along with all the actors at the grassroots, it is worth announcing and implementing a new methodology, a new flow, without having all the adjustments of our mistakes, when adopting the traditional methodology, made so far. Moreover, what is the actual dimension of women who already have a diagnosis of high-grade lesions, carcinoma in situ, and advanced cervical cancer without proper treatment? Before these launches, it would be convenient to decide, even with a joint effort, to clear the queues of women waiting for the proper treatments and even vaccination (since it is known that vaccination adds benefits for future relapses and/or diseases).

Anyway, new tactics are always welcome and should be sought after. However, care must be taken not to dismantle a system (or create high expectations) before there is a guarantee and knowledge that the new system will have greater and better benefits for the populations involved in the short and long term.

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