Migrant women and cervical cancer: background of a prevention study

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Summary

The study was scheduled in order to organize a program of prevention against cervical cancer in female migrants in Rome, and therefore to facilitate access to appropriate preventive oncological facilities for discriminated women. Moreover, the study will also investigate the risk factors and social conditions (HPV-subtypes, sexual behavior, smoking habits) of such women since their migration to Italy. This is scientific and cultural background of a longitudinal, observational study on the cervical cancer risk in Roman migrant population. By means of a mother language questionnaire (with the presence of a cultural mediator) it will be possible to achieve data on social conditions and the new life-style. An HPV-testing (HC2) combined with Pap-test (with further genotype distribution) will be performed in all women enrolled in the study. Further diagnostic/therapeutic decisions will depend on the results of both tests. Scientific results are expected in the next two years, but an increasing of cancer prevention awareness among female migrant populations is expected from the beginning of the program. The present study was aimed at culturally appropriate intervention strategies to limit the disparities that migrants usually suffer in most of the developed Western nations in respect to the native counterparts.

Key words: Cervical cancer; Prevention; Migrants; Health discrimination.

Introduction

Key indicators suggest that health in Western countries continues to improve, while in less developed countries it is still much poorer than in the past. This socio-economic imbalance represents the main engine for human migration. Moreover, the reproductive health of migrants, and their political and economic condition, is lagging behind that of host populations. Indeed in some situations it may be worsening. Migrants different nationalities constitute a significant and growing proportion of the national populations of the "old" Western Europe. For public health reasons, as well as for ethical and human rights reasons, the reproductive health of migrants calls for urgent attention.

The growing pace, magnitude and geographic scope of migration in and between countries everywhere is accelerating, and with it the size and impact of the problems associated with migration are becoming more evident and potentially more serious. Conservative estimates place the number of people living outside their place of birth at around 175 million, but the number of people "on the move" including refugees, internally displaced people, rural-urban migrants, market people, students, seasonal workers and clandestine migrants may be as many as two billion [1].

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The increased pace of migration has been mostly marked in and between developing countries, but it has also become very evident in Western Europe where rapidly changing economic and demographic conditions are attracting and necessitating new human resources, while offering political sanctuary to others.

Reproductive health of migrants

As with health and health care in general, migration places people under such conditions affecting their reproductive health and their access to, and use of, reproductive health care services.

Gender issues run through the gamut of reproductive health and health care issues. The fact that female migrants are now outnumbering men in many parts of Western Europe calls for special attention to be given to problems: such as work-place exploitation, discrimination in terms of remuneration and, sometimes, sexual abuse. The status of migrant women within migrant communities also calls for attention, especially since there is evidence that in "strong" ethnic communities many of the gender-based abuses associated with previous life often persist and place women in situations that are replete with contradictions for health.

The findings from different studies suggest that migrant women do not access gynecological care services in the same way and or to the same extent as the host-country population. A UK study reported that refugee women from former Yugoslavia were far less likely to

access cervical screening programs than "nationals". For example, 30.5% of refugee women (compared to 17.5% nationals) said they had never had a cervical smear. Among those that had a Pap-test, the proportion with abnormal smears was 40% compared to 21.2% in the national population [2], highlighting the fact that many women may be delaying their check-ups until it is too late.

Ethnic background and migrant status also appear to play a role in the risk of poor breast cancer detection. A study in Denmark found that 71% of Danish-born women readily accepted mammography, compared to far fewer migrant women (from Pakistan, ex-Yugoslavia, Turkey). Moreover, almost half of the migrants failed to show up for their appointments, with the result of more advanced and less easily treatable breast cancer in such population [3, 4].

If the reproductive health of migrants is not promoted and protected, the health of all Europeans will suffer. Reproductive health affects family and community health as well as individual health, and when major disparities are allowed to emerge and persist among different groups of people, the health of everyone is gradually affected.

Cervical cancer background

Country-specific behavioral, health, economic and demographic measures are strictly related to the cancer risk profile in developing areas. It is estimated that in low-resource countries all of the cancer-related deaths (by viral agents such as HBV or HPV, tobacco consumption, and Western-type diets) will exceed, in the near future, the infectious deaths. Among these populations the risk of cervical cancer is particularly high. Of the estimated yearly worldwide 470,000 cervical cancers, 81% (380,000 women) occur in the developing world [5]. Indeed, the definition of the word *developing* is represented by these areas where cervical cancer is still the leading cause of cancer death: the African continent (mainly the Sub-Saharian territories), South/Western Asia, and Central/South America.

Nevertheless, some Eastern Europe areas (Poland, Estonia, Slovakia) report lower survival rates after cervical cancer treatment compared to the richest northern countries (Sweden, Netherlands, Norway) [6]. Moreover, socioeconomic transition within some parts of Europe has been shown in the loss of previous improvements in the health of women, and this has generated health disparities. In Central and Eastern European countries and the newly independent states of the former USSR poverty has caused a reduction of female life expectancy [7].

The same poor levels of human development and low economic resources, which contribute to the high risk for cervical cancer incidence and mortality, sustain the immigration flux to the industrialized world. World Health Organization reports that most of the nearly 175 million migrants (2.9% of the world's population) generally belong to the lower social level, have limited access to health facilities and thus migrants must be considered at high-risk for any disease. Indeed, most women from undeveloped countries themselves are not aware of cancer screening or facilities available, as revealed from a Nigerian study: only 15% of the women had ever heard of cervical cancer [8].

Cervical cancer screening

Cervical cancer can be prevented by using relatively inexpensive screening (Papanicolau test) to detect abnormal cervical tissue before it progresses to invasive cancer. Although Pap smear screening remains the best available method for reducing cervical cancer [9], its application is still geographically related. In industrialized countries cytological screenings strongly decreased incidence and mortality from cervical carcinoma (about 80% in Finland [10]), while screening programs have rarely been implemented and virtually never sustained in most underdeveloped countries [11]. Indeed, as quoted by Sankaranarayanan [12], cytology screening is yet to be effectively implemented in many developing countries or has failed to reduce the cervical cancer burden to an appreciable extent in some developing countries.

Cytologic screening programs are expensive and require trained cytotechnicians, high-quality laboratories that maintain adequate quality-control programs, an infrastructure for transporting smears to the laboratory and results back to the clinical site, and the capacity to recall, diagnose, and treat women with abnormal results [13].

In these areas the lowest doctor ratio for the population worldwide is also reported [14], with scarse possibility of medical opportunities and, as a consequence, any preventive consciousness.

In other words, in such poor countries only 5% of women have been screened for cervical dysplasia, compared with some 40-50% in developed nations. The effects of these discrepancies are that, up-to-now, the incidence rate for cervical cancer is about 3.8/100,000 women in Finland, compared to more than 30/100,000 women in South Africa [15].

Visual cervical inspection after acetic acid application (VIA) [16] and HPV-DNA testing have been recently proposed [17] as reasonable screening strategies in low-resource settings.

Indeed, in such situation the HPV-prophylactic vaccination has a tremendous potential to lower the incidence and mortality from cervical carcinoma. An HPV vaccine could have the greatest utility in such developing countries, but there are many difficulties for an extended vaccination program in these areas. First of all, there may be significant differences in HPV vaccine immune responses among malnourished populations, compared to Western countries. Moreover, papillomavirus vaccine can be locally produced, easily stored (which means thermo-stable) as well as easily/cheaply distributed and protective after only a single-dose.

Cancer disparities in developed countries

Cancer disparities (in terms of incidence and mortality) by race/ethnicity are strictly related to a complex interplay of economic, social and cultural factors. The condition of "poverty" has been defined as the *mostcritical factor affecting health and longevity* [18]. Indeed, the status of migrants influences the prevalence of risk factors for cancer (see above) and affects the access to appropriate early detection, cancer treatment (particularly the conservative approach), follow-up, and pain management.

For all cancer sites residents of poorer countries have a higher cancer death rate than residents in more affluent countries, and also within each racial/ethnic group those living in poorer countries have the lowest survival rates [19].

Moreover the American Cancer Society has focused on the trend in cancer disparities (breast, colon-rectum, lung, stomach, uterine cervix) between the racial segregates of the American population: African, Asian, Pacific Islander, American-Indian, Hispanic-Latino [20]. Although biological and inherited features are less important than socioeconomic characteristics in explaining the disparities, different rates of cervical cancer in migrant women may be due to the prevalence of HPV-subtypes [21].

Furthermore, as it has already been highlighted for the United Stated (but is valid for all of Western countries), *"…there is a critical disconnection between what we discover and what we deliver to all Americans in the form of prevention, diagnosis, and treatment of cancer. Cancer disparities exact an extraordinarily high human cost and a significant economic cost to this nation"* [22].

It is also important to put in evidence the higher prevalence of comorbid conditions, the higher rate of patients' treatment refusal or the lack of physician recommendation in the minorities groups [23]. All these factors may therefore interfere with the survival rate for cervical cancer [24], which seems to be significantly lower in Afro-Americans (57.5%, 5-yrs for all stages) versus Whites (71.5%).

The risk-status of migrant women

Variables that may enhance the risk for cervical cancer in the migrant female population depend on:

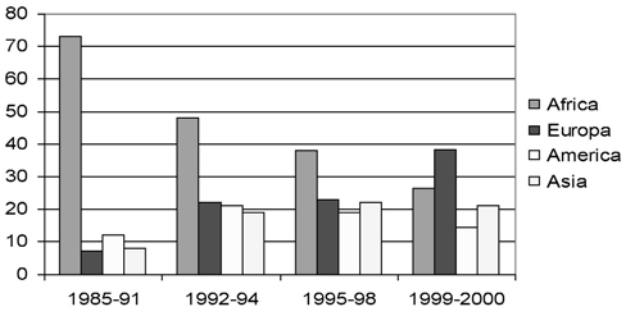
a) social integration in the host-country: communication and racial difficulties, utilization of preventive care services, discrimination, type of employment;

b) personal life-style: sexual behavior, number of partners, smoking and dietary habits, etc.

c) personal life conditions: homeless, refugees, legal status (irregular), temporary or permanent mobile status, victim of prostitution *(trafficked women)* with the possible major risk under such sexual conditions.

Most of them are not aware of cancer screening or facilities available, and the knowledge of all cancer-related problems is also very limited. Indeed, it seems that the discrepancy between the north and south of the world concerning cervical cancer incidence-mortality is paralleled by a similar discrepancy regarding education and knowledge of this problem.

Table 1. — *Distribution by birth-continent of female migrants observed at the Department of Preventive Medicine of Migration, Tourism and Tropical Dermatology of the San Gallicano Dermatological Institute (Rome).*



The possibility to have access to the preventive national tools for mobile women is also limited because traditional public-health programs are only directed at sedentary communities. This appears also true for the so-called *ethnic minority groups* which suffer from barriers to cancer screening compared with the majority of the population [25]. Some studies on Vietnamese migrants to the USA [26] revealed that the number of women who adhere to cervical cancer screening guidelines is low and, as a consequence, the most commonly occurring cancer in such mobile females is indeed cervical cancer. Vietnamese-American women were more likely to have high-risk HPV types [27] and had the highest rates of cervical cancer (43/100,000 women) of any racial/ethnic group in USA.

The human papillomavirus infection

Up-to-now it is well stated that human papillomavirus (HPV) infection is the *necessary cause* of cervical cancer. The risk of acquiring such infection, which represents worldwide the first sexually transmitted disease, is directly related to sexual activity and particularly to the number of sexual partners.

Thirteen out of the 100 and more identified genotypes are considered as high-risk for cervical carcinogenesis. While low-risk HPV infection is very common and transient, only a very small proportion of high-risk infections will further develop into cervical carcinoma. On the other hand, cervical cancer contains fragments of integrated HPV-DNA in the host-genome.

As stated in a series of population-based HPV surveys coordinated by the International Agency for Research on Cancer (IARC), there are many variations in HPV prevalence worldwide. The HPV prevalence in poor-resource settings, by means of PCR techniques, is reported from 18% in Nigeria [28] up to 44% in Kenya [29].

The identification of HPV infection has many and substantial implications in terms of global public health, particularly for migrant women. By using detecting methods for HPV, such as Hybrid Capture 2 (HC2, *Digene*®) inte-

grated with the traditional Pap test, it would be possible to select women with high-risk HPV-subtypes to submit to further diagnostic procedures. Moreover, it may be more feasible to set up HPV-DNA testing on the low-resource site, than to provide on-site cytology services. In a South-African study a prevalence of high-risk HPV-DNA up of 22% was detected by the HC2 technique (12) in a urban female population also affected by other STD: chlamydia or gonorrhea (6%), trichomonas vaginalis (18%).

On the contrary, such integrated preventive tools could reassure women with both negative results (Pap and HC2), which are at very low-risk (near zero) for the next five years.

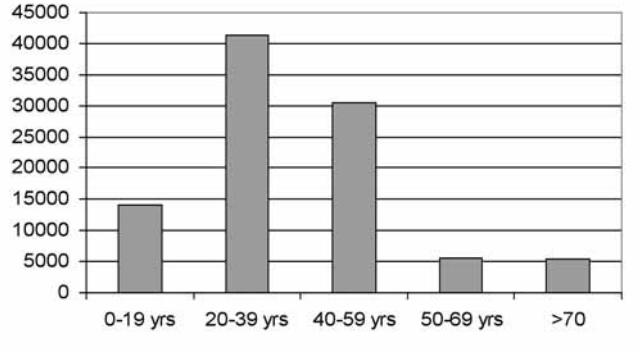
Migratory waves in Rome

During the decade 1970-80 the city of Rome was the objective of a relevant "first" migratory wave: mainly from the Philippines, South and Central America. In such period there was a relevant demand for private domestic labor, so that a *"healthy migrant effect"* was seen. It means that migrant women were submitted to self-selection. Only those who were in good health and physical/psychological aptitudes arrived in Rome. Such migrant populations were mostly legal, tended to live in communities, were characterized by a high social integration in the host-country population and had a sedentary profile.

From 1999 we assisted with a "second" relevant migratory wave, mainly from the former USSR, North-Africa or Albania. The lifestyle of these women was completely different from the other previously described. Most of them arrived in Rome for reconjunction, or because they were refugees, displaced, victims of human trafficking, and easy targets for illegal employment. They do not usually live in communities, tend to have a low profile of integration and continue to be migrant. Moreover, most of them suffer from other comorbidities.

Up-to-now (Table 2) most female migrants (42.5%) in the Roman district are in the second to third decade of life and therefore represent an ideal target for cervical cancer screening.

Table 2. — *Age distribution of female migrants in the District of Rome (2003).*



Present Study

A cervical cancer prevention study in a migrant Roman community

Little data are available on cancer incidence for inter-European migrations and on all the strategies that reduce barriers to screening.

The present study, just started in Rome, is a longitudinal, observational study on HPV prevalence among the migrant Roman community. The enrollment will be done at the Department of Preventive Medicine of Migration, Tourism and Tropical Dermatology of the San Gallicano Dermatological Institute, which historically represents the main health meeting point for migrant populations in Rome.

The objective is to increase the confidence of women as well as their consciousness of cervical cancer risk. It will also be important to value the health belief model factors, socio-demographic variables and the barriers to screening related to cervical cancer prevention.

After signing an informed consent, the women will be asked to fill in a questionnaire in their mother-tongue language about the risk factors and to attend a face-to-face gynecological interview. Such questionnaire, in order to value the impact of migration, has been divided into two parts concerning the life-style *before* and *after* arriving in Italy. A cultural woman mediator (for each language) will help the patient fill in the questionnaire.

After this preliminary step, the Pap smear and HPV test (HC2) will be performed. In all women positive to HC2 a genotype evaluation (by means of PCR) will also be performed.

All women with both negative tests (cytological and viral) will be invited after 24 or 36 months for follow-up regarding the presence of other risk factors.

Women with only a HC2 positive test will be followed at 6-12 months.

A second diagnostic level (colposcopy, with further biopsy if required) will immediately be performed in the following cases:

– women with cytological abnormalities ≥ LSIL (regardless of the viral test);

– women with ASCUS and HC2 positive for high-risk subtypes.

Scientific results are expected in the next two years, after enrollment of about 800 women.

Conclusions

Culturally sensitive educational interventions and cervical cancer preventive programs for migrant women are needed to increase the early detection of cervical cancer. Appropriate intervention strategies, employed in conjunction with clinical services, can be successful in increasing cancer prevention awareness and screenings among female migrant populations.

The present prevention program for migrant women aims to enhance the consciousness of cancer risk in such high-risk populations, and is directed to increase the participation of women and to facilitate access to health preventive services.

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