



WORKSHOP 7
Thursday 15 October
h. 14.00-15.30
Brown Room 1

Management of women at high risk of hereditary breast cancer in the Veneto Regional Program for Prevention

La gestione delle donne ad alto rischio di tumore mammario ereditario nel Piano regionale della Regione Veneto

Annamaria Del Sole,¹ Sandro Cinquetti,¹ Chiara Fedato,¹ Marco Montagna,² Francesca Russo,³ Luca Gino Sbrogiò,⁴ Manuel Zorzi⁵

¹Coordinamento regionale screening oncologici, Regione Veneto, Italy; ²Istituto oncologico veneto, Padova, Italy; ³Servizio promozione e sviluppo igiene e sanità pubblica, Regione Veneto, Italy; ⁴ULSS 14, Italy; ⁵Registro Tumori Veneto, Padova, Italy

Corresponding author: Annamaria Del Sole; e-mail: annamaria.delsole@ulssadria.it

Abstract

Introduction. Today it is well-known that high risk of genetic breast cancer concerns a very limited part of the population: no more than 2-3 women are affected every thousand and this condition as a whole accounts for no more than 3%-5% of all breast cancers.

Objectives and methods. Following the directions contained in the 2014-2018 National Prevention Plan, Veneto's 2014-2018 Regional Program of Prevention (PRP), approved by Regional Council Resolution (DGR) No. 749 of 14.5.2015, consolidation of a pathway of diagnosis, observation, and prophylaxis for women at high risk of hereditary breast carcinoma is thus proposed. The principal activities of this policy will be the following: creation of a regional working group, survey of currently existing pathways for the identification of women at risk of hereditary breast cancer and adoption of the same, approval and consolidation of a structured regional pathway for women at high risk of hereditary breast and/or ovarian cancer, from paths of oncogenetic consultation and genetic testing to management of disease risk. Subsequent to the recognition of the pathway of diagnosis, observation, and prophylaxis for women at high risk of hereditary breast carcinoma, the Veneto region undertakes to develop a co-ordinated program of information and training on this pathway directed at the population and healthcare workers.

Conclusions. It is firmly hoped that with the inclusion of a program for the management of women at high risk of hereditary breast cancer within the Veneto PRP this topic may become more defined and structured in terms of sustainability, integration with the existing regional networks (mammography network, Breast Unit), contrasting inequality, monitoring and evaluation, in this way pursuing the objectives of a reduction of cause-specific mortality and improvement of quality of life.

(*Epidemiol Prev* 2015; 39(4) Suppl 1: 99-101)

Key words: hereditary breast cancer, cancer screening, public health

Riassunto

Introduzione. A oggi è noto che l'alto rischio mammario di origine genetica riguarda una quota molto limitata della popolazione: ne sono affette non più di 2-3 donne ogni mille, e questa condizione spiega complessivamente non più del 3-5% di tutti i tumori della mammella.

Obiettivi e metodi. Su indicazione del PNP 2014-2018, il Piano Regionale della Prevenzione (PRP) 2014-2018 della Regione Veneto, approvato con DGR N° 749 del 14.5.2015, si propone di consolidare un percorso di diagnosi, sorveglianza e profilassi per le donne con rischio elevato per carcinoma mammario ereditario. Le attività principali di tale linea progettuale saranno le seguenti: creazione di un tavolo di lavoro istituzionale regionale, censimento dei percorsi attuali esistenti per l'identificazione delle donne con rischio di tumore mammario ereditario e sulla presa in carico delle stesse, approvazione e consolidamento di un percorso regionale strutturato per le donne ad alto rischio di tumore mammario e/o ovarico ereditario, dai percorsi di consulenza oncogenetica e test genetico alla gestione del rischio di malattia. Successivamente al riconoscimento del percorso di diagnosi, sorveglianza e profilassi per le donne ad alto rischio di carcinoma mammario ereditario, la Regione Veneto si impegna a sviluppare un piano coordinato di informazione e formazione su tutto il territorio.

Conclusioni. Si auspica che con l'inserimento di un programma all'interno del PRP della Regione Veneto per la gestione delle

donne ad alto rischio di tumore mammario ereditario tale tema possa diventare maggiormente definito e strutturato in termini di sostenibilità, integrazione con le reti regionali esistenti (rete mammografica, Breast Unit), contrasto alle disuguaglianze, monitoraggio e valutazione perseguendo, in tal maniera, per tali categorie di donne gli obiettivi di riduzione di mortalità causa-specifica e miglioramento della qualità di vita.

(*Epidemiol Prev* 2015; 39(4) Suppl 1: 99-101)

Parole chiave: tumore mammario ereditario, screening oncologici, sanità pubblica

INTRODUCTION

It is well-known today that the high risk of genetic breast cancer concerns a very limited part of the population. In fact, no more than 2-3 women are affected every thousand and this condition as a whole accounts for no more than 3%-5% of all breast cancers. A particular feature of this condition, which differentiates it from other high-risk conditions, is that it derives from mutations with dominant-type transmission, thus all knowledge has direct implications on the family the patient belongs to, foremost the patient's progeny.^{1,2}

Despite its limited epidemiological significance, this condition represents a serious problem for women who are carriers of the mutation, or fear they are, and for their families, so the National Screening Observatory (ONS) considers it must be approached from a public health perspective.³

In Italy, the region Emilia-Romagna's program of active intervention on research into female carriers of hereditary risk currently stands out (Decree no. 2202011, Applicatory Circular no. 21, 2011 in www.saluter.it/screening_femminili and Diagnostic, Therapeutic and Care Paths PDTA 2014).⁴ This is a free program managed through a network-based model, based on a genetics Hub Centre and a breast pathology Spoke Centre, using as a primary filter to verify the family health history a questionnaire which is offered to women undergoing mammography in the breast cancer screening program. Furthermore, the family history risk can be evaluated through the same questionnaire by GPs and specialists in this area (radiologists/breast pathology specialists, gynaecologists, surgeons, etc.) on request of the female patient. This experience, certainly the most interesting from the point of view of public health, is currently under evaluation both in terms of effectiveness and efficiency.

The Health Minister, in line with the 2010-2012 National Program for Prevention (PNP), entrusted the Università Cattolica del Sacro Cuore with a policy to help make the use of genomic tests predicting complex diseases more suitable and rational, acting, among various strategies, by training those who could potentially prescribe genomic tests. Specifically, training has been implemented in Veneto, among other regions, both through distance learning and on-site courses at all provincial medical associations. In these courses the need emerged for GPs and prescribing doctors in general to know the potential of predictive medicine, in order to avoid creating false expectations and contribute in an interdisciplinary way to the implementation of this new dimension of medicine.

Hereditary breast cancer is also mentioned in the 2014-2018 National Prevention Plan in connection with the most recent

knowledge and in line with the previous PNP and the guidelines on «Genomics in Public Health»⁵ as per the agreement dating 13.3.2013.⁶ One of the strategic lines to adopt for cancer prevention is the development of an organized pathway for the prevention of breast cancer on the basis of genes (*BRCA1* and *BRCA2* mutations), with features integrating and complementing the already existing breast cancer screening program.

OBJECTIVES AND METHODS

Following the directions contained in the 2014-2018 National Prevention Plan, the 2014-2018 Veneto Regional Program of Prevention (PRP), approved by Regional Council Resolution (DGR) no. 749 of 14.05.2015,⁷ consolidation of a pathway of diagnosis, observation, and prophylaxis for women with a high risk of hereditary breast carcinoma is thus proposed. The principal activities of this policy will be the following:

- creation of a regional institutional working group which will involve experts on the topic in various capacities (personnel coordinating regional cancer screening, personnel from the Veneto Institute of Oncology-IOV, personnel from the regional Public Health Genomics Group, etc);
- survey of currently existing pathways for the identification of women at risk of hereditary breast cancer and adoption of the same.

On this subject, the multi-disciplinary working group of the Veneto Institute of Oncology, co-ordinated by the Hereditary-Family Breast/Ovarian Cancer Service has perfected a clinical/diagnostic course devoted to patients and healthy subjects belonging to families at high risk of breast and/or ovarian cancer. The activity of this group has permitted integration of the multi-disciplinary competences of the Institute connected to the genetic test, from genetic counselling to diagnosis, from prevention to therapy, including psychological aspects.

Co-ordination of a territorial network linking most of the Health Districts in Veneto and the autonomous provinces of Trento and Bolzano makes it possible to provide continuity of care to subjects at risk of hereditary cancer through structured multi-disciplinary coordination, according to the level of specialization, between the centres within the network. In particular, level II centres carry out the activity of cancer counselling, risk estimate, and referral to genetic testing, in line with what is indicated by the central specialized medical facility. The level II centres are also responsible for communication of the result of the test through post-test counselling, as well as extension of the genetic study to family members and activities

of prevention/observation of the subjects at risk of hereditary breast and ovarian cancer. Level I centres (primary care) carry out an initial evaluation of family history of cancer and select the patient to refer to the central specialized medical facility or the level II centre for genetic-cancer counselling.

Thanks to collaborative projects pooling national and international data, the most recent scientific acquisitions for the definition and management of «hereditary risk» are integrated in an operative model which has been the subject of verification and approval by international bodies for external quality control and has been subjected to the attention of the institutions acting as reference in Veneto. The database managed by the central specialized medical facility (IOV) contains the case history and genealogical as well as molecular data of 2,500 families for a total of 3,419 genetic tests (blood relations included). The individuals with a positive test result number 762. There are 429 individuals belonging to high-risk families but with a negative result for the family's mutation and therefore excluded from the intensive programs of prevention/observation. The current critical points of this pathway are:

- access to genetic tests for women (and family members) who, on the advice of a medical expert, wish to learn more about their own hereditary-family risk is linked to criteria based on recommendations and national and international guidelines which should be updated in the light of new scientific acquisitions and subjected to the region's approval;
- despite the high risk of disease (breast cancer and ovarian cancer) of female carriers of the *BRCA1/2* mutation, exemption from payment of the charge ("ticket") for pathways of

- observation/prevention does not currently exist in Veneto;
- incomplete training and information provided to personnel in the level I structures (primary care) on the criteria of selection and protocols of observation/prevention for high-risk subjects;
- approval and consolidation of a structured regional pathway for women at high risk of hereditary breast and/or ovarian cancer, from oncogenetic consultation and genetic testing to management of disease risk.

Subsequent to the recognition of the pathway of diagnosis, observation and prophylaxis for women at high risk of hereditary breast carcinoma, Veneto undertakes to develop a co-ordinated program of information and training on this pathway directed to the population and healthcare workers, and plan how to disseminate it to all Local Health Service Agencies.

CONCLUSIONS

It is firmly hoped that with the inclusion of a program for the management of women at high risk of hereditary breast cancer within the PRP of the Veneto Region, this topic may become more defined and structured in terms of sustainability, integration with the existing regional networks (mammography network, Breast Unit), the fight against inequality (exemption from payment), monitoring and evaluation, even taking as a reference model certain aspects of the organization of cancer screening programs, thus pursuing the objectives of reduction of cause-specific mortality and improvement of quality of life for women with high hereditary risk.

Conflicts of interest: none declared

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