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A clinical and organizational model entirely devoted to pelvi-perineal health: a new model of care

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ABSTRACT

Pelvi-perineal disorders represent a wide spectrum of diseases involving different disciplines. A patient-centered care and a coordinated approach, extended from functional to oncological diseases, may be achieved through the planning of a "pelvi-perineal network". The network is a new clinical and organizational model, entirely devoted to pelvi-perineal health through a multidisciplinary multiprofessional approach, coordinated and synergistic. The network is a new mental approach, without walls, to treat different diseases in the same patient and not a concrete management unit for single disease. In the network the team care approach is critical to get a more in-depth understanding of the symptoms cascade and to define a coordinated integrated management.

Keywords: Care model; chronic pelvic pain; network; pelviperineology; urogenital tract; vulvodynia

Introduction

Pelvi-perineal disorders represent a wide spectrum of diseases involving different disciplines. Until recent years, urologists, gynecologists, proctologists, and colorectal surgeons had worked independently in their pelvic compartments neglecting the other specialties.

The presentation in 1990 of a ligament-based theory as a universal theory of pelvic floor function and dysfunction - the Integral Theory (IT), represents the first attempt to overcome the boundaries between the traditional areas of specialization that become barriers to optimal best practice management of the patients having a pelviperineal disease.[1]

The implication of the Integral Theory

This theory has permitted to bring back the attention of the international scientific community on the pelvi-perineal unit: according to anatomy and physiology, the perineum represents a single embryological, anatomical and functional entity. An example of this can be found when considering the epidemiological and physiopathological data on pelvic statics disorders: connective, muscular and neurological lesions involve the three levels of the perineum - urological, gynaecological and ano-rectal - according to the location and relationships between the pelvic organs.

It is no longer achievable for any physician dealing with pelvi-perineal disorders to reach an in-depth expertise in more than one or two of the rapidly expanding subspecialist fields. In addition, communication between different specialists is frequently sub-optimal and too often, the patient has to follow a fragmented management. The quality, the location and relationships between the pelvi-perineal organs require healthcare providers speaking the same language and

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considering that a global approach to pelvi-perineal disorders is necessary.

The new patient-centered paradigm

In recent years, new models of care, even if limited to lower female genital tract, have been proposed in order to overcome the fragmented management of pelvi-perineal disorders.[2] According to these proposals, we are convinced that the unitary view of the pelvi-perineal compartment is the only way to ensure more rational and effective solutions to the patients.

A patient-centered care and a coordinated approach, extended from functional to oncological diseases, through the planning of a "pelvi-perineal network" is the way to reach a solution of the fragmented clinical optimal management. The value of this new concept is not to create a novel specialty but to sensitize and gather the different specialists dealing with pelvi-perineal disorders.

The network is a new clinical and organizational model, entirely devoted to pelvi-perineal health through a multidisciplinary approach, coordinated and synergistic. The network is a new mental approach, without walls, to treat different diseases in the same patient and not a concrete management unit for single disease.

Pelvi-perineal compartment is now to be considered as a composite group of different organ systems that interact with one another principally from a functional point of view. Consequently, a single disease may affect more than one organ system, and comorbidities may interact.

Examples of conditions covered by the new approach

A localized endometriosis of bladder, urether, recto-vaginal septum requires a multi-modal approach starting from the correct diagnosis to the combined mini-invasive surgical approach.

An anterior and posterior pelvic organ prolapse must require different approaches in terms of diagnosis and treatment, and the proctologist cannot restrict his competence to the posterior compartment; similarly, the urologist, gynaecologist and general surgeon when evaluating pelvic floor diseases, must take into account the posterior compartment.

Pelvi-perineal pain represents serious health problem for any patient and also a challenge for any physician; behind this symptom, a variety of overlapping conditions may exist: pelvidynia, vulvodynia, interstitial cystitis, somatization disorders, pelvic floor dysfunction, bowel disorders, and myofascial disorders.

An advanced rectal cancer, involving adjacent organs, is to be considered a multiorgan disease requiring a combined concomitant medical and surgical management; a multispecialistic coordinated approach avoids time-consuming repeated procedures, limiting patient's discomfort and psychological distress.

Proctologist, urologist, urogynecologist, physiatrist, sexual therapist, psychologist, enterostomal therapy nurse, rehabilitation nurse, trained midwife, and physical therapist have to interact in solving the progressive disorders occurring in such complex cases.

These few examples clearly show the complexity and the comorbidity of the pelvi-perineal disorders, encompassing pelvic organ prolapse, lower urinary tract dysfunction, anorectal dysfunction, vulvar diseases, bowel and urological cancers, infections, sexual interest and arousal disorders, pelvi-perineal pain, urinary and fecal incontinence. These disorders, alone or combined, may affect all the different episodes of a patient's life, requiring a proper continuity of care.

The team care

The team care approach is critical to get a more in-depth understanding of the symptoms cascade and to define a coordinated integrated management.

It is mandatory to better understand the interactions between the pelvi-perineal compartments, to create a common language, and to use randomized controlled studies with long follow-up to evaluate the anatomical and functional results of the different combined therapeutic approaches.

In addition, the development of social implications of pelvi-perineal associated disorders has increased the number of patients referred for these diseases and the medical consideration of this compartment.

Today, in a patient-centered health-care approach, the pelvi-perineal disorders require careful clinical assessment, appropriate investigations, and counselling before embarking on a well-defined management pathway, including behavioral and lifestyle changes, conservative treatments (pelvic rehabilitation, physical therapy, and biofeedback), pharmacotherapy, and minimally or invasive specialized surgery.

Good clinical care and governance are to be reached through a team approach. The past compartmentalization of the pelvi-perineal unit in independent sites and, consequently, the partitioning of the patients into urological, surgical, proctological, gynecological, or anorectal approach, depending on the patients' presenting symptoms, are no longer advisable.

The first step in organizing the pelvi-perineal network is to define the fields of competence, among the different specialists (nurses

and physicians) that may converge in a shared overlapping knowledge, avoiding disagreement.

The second step is defining the multidisciplinary clinical pathway for each disease to be managed, achievable together with the designation of a coordination group. This team of specialists, individually involved in pelvi-perineal diseases, represents the core of the network.

A key-role is played by the outpatient services managed by trained nurses, to permit the correct assessment of the patient and access to the network. After the hospital multidisciplinary treatment approach, the outpatient ostomy sub-network and the pelvi-perineal rehabilitation sub-network strongly interact in order to guarantee the correct care of the patients.

Particular importance is given to continued education: clinical case multidisciplinary discussion, interdisciplinary course organization about pelvi-perineal disorder management, self-education in specific topic (rehabilitation, psychosexual therapy, and minimally invasive surgery) permit to achieve a high standard and uniformity in the different multi-specialty procedures.

Strenghts and limitations

Complex multidisciplinary care is often fragmented and limited by "clinical linkage deficiency". Many articles have stressed the importance of implementing patient-centered care by building networks, but despite progresses in understanding what the networks are, how they are structured and operate, little is known about their effectiveness and sustainability in clinical practice.

A systematic review on "health professional networks" reveals that only 26 articles on 1560, resulting for title and abstract review, have a focus on the structure of health professional networks.[3]

Anecdotal experiences in "patient-centered network approach" are reported in projects on fertility care or cancer care, without systematization.[4]

Despite the lack of studies on the clinical application of this new concept of care, we are convinced that it is more efficient in respect of the traditional approach in contents, time investments, professional motivations, even if further researches are needed to demonstrate this efficiency.

This approach would seem dedicated to patients traveling numerous complex pathways only, but the characteristic and the complexity of the "patient-centered network" care are important in facilitating greater levels of quality of care and patient safety, allowing professionals from different disciplines to embrace this new theory as a common paradigm. In this way, the quality-related performance, also in patients travel a clear monodisciplinary pathway, will be increased.

The pelvi-perineal disorders management requires the involvement of intensive collaborating professionals and liable patients. The team participants experience is one of the success factors in realizing the network and maintaining the inter-professional teamwork across commonly occurring organizational divides (professionals, genders) is the real challenge. Being in an effective network, encouraging communications and interactions, promoting education with continuous learning, are the building blocks of an effective and resilient professional patient-centered network.

Pelvi perineal network methodology

The first example of this new "pelvi perineal network" organization model, starting from the project of a "lower female anourogenital network" is defined in Italy. The Azienda Sanitaria Locale di Ivrea, Ciriè e Chivasso (ASLTO4) covers a catchment area of more than half a million people and encompasses five hospitals and outpatient divisions related to pelvi-perineal management; urological, gynecological, and colorectal surgical wards and outpatient services; perineal rehabilitation subnetwork, ostomate subnetwork; community nurses subnetwork; physical therapy services; psychological and sexual services.

Particularly, the recruitment protocol starts in outpatient services, where the patient with a pelvi-perineal disorder receives the first assessment and the access to the network (Level 1). After the identification of the main and eventual secondary associated disorders, the patient is assigned to the hospital specific clinic (urological, uro-gynaecological, proctological, etc – Level 2) receiving the hospital multidisciplinary management approach. Level 3 is reserved for complex cases requiring expert decision management (combined multi-specialty surgical procedures).

After the hospital management approach, the patient is assigned to the sub-networks (perineal rehabilitation, ostomate, community nurses) to receive the individualized care. The clinical pathways are updated and re-discussed timely.

This strategic functional and structural pelvi-perineal coordinated network, with trained nurses and specialized physicians, has permitted us to achieve patient's health improvement in both prevention and management, human resource rationalization, expense reduction, and knowledge diffusion.

Contributions

Concept: F.B., C.O., Data Collection or Processing: F.B., C.O., Analysis or Interpretation: F.B., C.O., Literature Search: F.B., C.O., Writing: F.B., C.O.

Ethics

Peer-review: Internally peer-reviewed.

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