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## Review Article

## Italian Experiences in the Management of Andrological Patients at the Time of Coronavirus Pandemic -

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## ABSTRACT

The International Committee on Taxonomy of Viruses (ICTV), responsible for defining the official classification of viruses and the taxonomy of the Coronaviridae family, has officially classified under the name SARS-CoV-2 (Severe acute respiratory syndrome coronavirus 2) the virus provisionally called by the World Health Organization (WHO) 2019-nCoV.

The Corona Virus (COVID - 19) was first reported to Wuhan, China, in December 2019, then its rapid spread around the world caused a global pandemic in March 2020 recording a high death rate. The epicenter of the victims moved from Asia to Europe and then to the United States. This document analyzes the various experiences in hospital departments as well as the andrological private urgencies of Italian uro-andrologists, in particular in the most affected regions, Emilia-Romagna and Marche. In this pandemic, the different governance mechanisms adopted by the various regions made the difference in terms of contagiousness and mortality together with a community strong solidarity. In fact, although the pandemic is global, its responses depend on local governance, in addition to the socio-economic and cultural context.

**Keywords:** COVID - 19 pandemic; Government response; Citizens' behavior; Andrological patients

## INTRODUCTION

The International Committee on Taxonomy of Viruses (ICTV), responsible for defining the official classification of viruses and the taxonomy of the Coronaviridae family, has officially classified under the name SARS-CoV-2 (Severe acute respiratory syndrome coronavirus 2) the virus provisionally called by the World Health Organization (WHO) 2019-nCoV and responsible for COVID-19 cases ("CO" stands for corona, "VI" for virus, "D" for disease and "19" indicates the year in which it occurred) [1-3].

SARS-CoV-2 was identified for the first time in Wuhan, in the province of Hubei in China, and then rapidly expanded reaching Italy, where the Council of Ministers declared the state of emergency from 31.01. Until 31.07.2020. The Italian Prime Minister, in order to contain the contagion, extended some restrictive measures concerning gatherings and movements throughout the national territory with effect from 10 March. This logic of restrictions was above all to reduce the contagiousness (R0) of COVID- 19. The World Health Organization declared the pandemic on 11 March 2020 [4].

This whole situation has dramatically changed our habits, our priorities and also the perception of reality. WHO had warned each country of the risk of the "tsunami" of information, in particular some social media's fake news would have led to panic situations (supermarket raids , unnecessary visits to hospital emergency rooms, uncontrolled departures to other places, riots in prisons, etc.). At the declaration of a pandemic, the WHO added the "Infodemia", the dissemination of a considerable amount of information, coming from different and often unverifiable sources. Providing the correct information would be an important issue to help and reduce contagiousness and so mortality. A unique combination of strong governance, strict regulation, deep community vigilance and citizen participation have helped to combat this virus by reducing the risk of its infection [5].

SARS-CoV-2 has widely spread in less than three months because of a globally interconnected world. SARS-Cov-2 appears to save children while affecting, with a higher incidence, older males with multimorbidity [6,7].

The symptomatic picture includes various symptoms according to the evolution of the disease. The symptoms most commonly observed in patients before hospitalization may be fever, chills, dry cough, dyspnoea, asthenia, myalgia and / or arthralgia's, while nausea and vomit, nasal congestion, hemoptysis, diarrhea, conjunctival congestion are less common [8].

This symptomatology can be complicated starting from the third / fourth week, often in a dramatically increasing manner such as to require hospitalization. In severe cases, pneumonia, acute respiratory distress syndrome, sepsis and septic shock, endothelial dysfunction with thromboembolism can occur till to the patient's death [9].

It is important to remember that the patient with SARS-CoV-2 can also be asymptomatic or paucisymptomatic, thus contributing to the spread of the virus in the community [10].

## TRANSMISSION

In humans, the transmission pathways of the COVID-19 virus are mainly direct, that is, through the respiratory tract with the inhalation of respiratory droplets that are generated when an infected person speaks, coughs or sneezes. Viral transmission can also be indirect, i.e. mediated by inanimate vectors (soil, personal effects, paper sheets, money, plastic or metal surfaces, etc.) and in any case it will depend on the viral load present on that surface [11]. Although it is not possible to exclude this form of contagion, it is certainly far inferior to that which occurs by droplets. When in doubt, the advice is always to wash your hands well and often with soap and water when touching surfaces and objects, especially when you are outside but also when you are at home and handling objects from outside. Thorough hand washing and thorough cleaning of the environments in which we live, we eliminate this risk almost completely. After the infection, the virus multiplies in the human organism and can remain in a latent state (asymptomatic or paucisymptomatic patient) or in full-blown cases and constitute a source of contagion for other individuals.

Although the pandemic from COVID 19 is global, its restraint depends on local governance, in addition to the socio-economic and cultural context. This document analyzes the various experiences of Italian uro- andrologists in their hospital wards as well as in andrological private urgencies in Emilia-Romagna and Marche, in this lockdown period.

## Andrology state of the art in pandemic era COVID-19

### Department of andrology - cirm medical center - piacenza

From 30-01-2020 when the Italian Council of Ministers declared a state of health emergency, I decided to study in details the dynamics transmission of COVID-19 infection, trying to make a critical review of the scientific literature data in order to better manage a possible state of emergency. The perception of an individual threat, is the fear that triggers some physiological reaction of anxiety, which can also generate sexual troubles (erectile dysfunction, for example). Working in the private sector as a specialist in andrology, I tried



to protect my patients and myself adopting several precautions to limit the contagion (disposable surgical masks, shoe covers, gloves, aprons, headgears and visors) and moreover following the ministerial provisions I proceeded to perform only urgent visits and to produce telematic advice in required cases. On the first days of lockdown there were not any requests for specialist visits and the ones previously booked were cancelled by the same patients. After about ten days, people with a probable erectile dysfunction of stressogenic nature, began to call for telematic suggestions. It was clear that confinement, the loss of the usual routine, and the reduction social relationships had increased the sense of insecurity and anguish [12]. During the same period I had requests for urgent visits to people who complained orchids, epididymites, prostatitis, urethritis, balan postitis probably caused by an increase in sexual relations during the lockdown period. The patients were received individually, equipped with disposable PPE (Personal Protective Equipment, the Italian DPI) waiting alone for their turn. Any visit in the reproductive field was suspended according to the Italian Superior Health Institution directions which warned to interrupt the search for children in the period of lockdown.

### **Uro-andrologic unit, policlinico di s orsola, bologna**

From March 10, due to the measures introduced to limit the spread of the COVID-19, our academic hospital established urgent measures to reduce outpatient procedures, use of operating theatres and non-urgent clinical activity.

Initially, the Uro-andrologic department has been turned into medical department due to need for the management and treatment of patients with SARS-CoV-2; then, urological procedures were referred to another centre with limited number of beds, reduction of operating theatres ( from four to one daily) and priority for malignancy and obstructive uropathy conditions while Andrologic activities has been dramatically cancelled except for one case of three-components penile prosthesis reservoir removal for confirmed local infection. To date, no malignancies or other urgent andrologic procedures were scheduled during the restriction. In this scenario, the staff of urology and andrology department has been used to enhance assistance in the medical departments in order to support the activity of internists. Outpatient activities were limited to urgent consultations while patients with non-urgent (whenever possible consulted *via* telephone) have been postponed pending provisions relating to the end of the lockdown.

The psychological impact of the COVID-19 outbreak among the whole and specifically andrologic patients is still unknown. As expected, our web and Facebook pages counted an increase in visualization as well as an increasing in requests regarding access to outpatient consultation. Interestingly, most of the patients reported non-urgent diseases but rather conditions related to psychological burden such as penile enlargement and erectile dysfunction surgery.

### **Department of surgery, section of urology - macerata hospital**

I work in a non- academic hospital in the Marche region. The shift from patient centered medicine to a community centered approach was immediate. The cancellation of the scheduled operating sessions was the consequence of the need to make surgical decision no longer based on individual patients' needs but on the requirement to find beds in intensive and sub-intensive care for the management of patients suffering from SARS-CoV-2, mainly from neighboring areas of the northern part of the region. The immediate cancellation meant the suspension of the surgical treatment of the non-oncological

pathologies. In this situation, the andrological surgery, in its vast part, has suffered a drastic stop. Circumcisions, corporoplasties, varicocele and infertility surgeries, surgical treatment of erectile dysfunction have been suspended. My operative unit of Urology in Macerata Hospital contains 10 beds and, normally, 6 full time urologists and 1 resident work with daily activity across operating room and outpatient activities, performing about 1000 surgical procedures and 4500 visits per years. Our attitude was prompted to define our surgical and outpatient activities by following the provisions elaborated by the reference scientific societies [13]. However, the sensation was that of a neglect by the medical direction regarding the priorities indicated, imposing the planning of oncological interventions. It has been difficult to request anesthesiologist assistance in non-oncological urological procedures (eg. ureteral stenting). I had the feeling that it was forbidden to have no pathology other than SARS-CoV-2.

My center has been declared no-COVID Hospital but inside it has been created an operative unit specifically dedicated to COVID patients not in need intensive care. In this department an urologist is also weekly obliged to participate at clinical activities, alone or alongside internists colleagues.

Consequently, from the lockdown start, the andrological activity in my center was reduced to the management of several postitis in already known phimosis awaiting treatment, one spermatic cord torsion, two testicular neoplasms, two metastatic priapisms and three cases of mondon's disease. Requests for advice, even by telephone, were increased for problems that can be traced back to non-acute testicular pain. There have been no cases of penile trauma which were unusually frequent in the 6 months preceding the pandemic.

### **Uro-Andrologic-Azienda Ospedali Riuniti-Ancona(UOS)**

The health crisis that we are witnessing and which originated in Italy between the end of January and the start of February 2020 with the beginning of the first infected people, has involved the Marche Region, the 5th Italian Region in terms of numbers of patients and consequent patients hospitalized, ditto for deaths. The Ospedali Riuniti - Torrette- Ancona, which play the role of Regional Hub, immediately gave its orders to convert surgical beds, thus limiting all the other surgical activity, in order to grant, for resuscitation purposes, and therefore to provide doctors availability for intensive and non-intensive care in departments COVID. Eight COVID departments were established in a few days. The urological and andrological activity was interrupted, twenty-one beds were reduced to ten, with access only from hospital emergency room with detection of symptomatic tumors or due to loss of function organs, diseases with ongoing complications, traumatic events. Urological and andrological outpatient activity, cystoscopy and histillatory therapies, organ ultrasound (kidney, bladder, prostate, penis, testicle) activity were closed.

To date, the lockdown throughout the country has greatly reduced the incidence of traumatic events related to circulation or factory work. In 50 days we had to intervene on two traumas of the genital tract that happened due to DIY activities. We listed above the procedures agreed with the crisis unit created in the hospital, also consulting the recently published Sector guidelines [14,15].

The andrological surgical activity performed concerned only two orchiectomies for testicular cancer, one amputation of the penis for cancer and one gangrenous necrotizing fasciitis of the genitals and pubis in diabetic subjects and HIV+.

Department uro-andrologic - civil hospital - Civitanova Marche (CM)

As soon as the pandemic from Coronavirus emerged, the Civitanova Marche Civil Hospital in which I have worked since 1 December 2017 has been converted into a Covid-Hospital, as well as most of the staff who were employed in it. All departments were progressively occupied by symptomatic Covid positive patients, diverting patients affected by other pathologies to other nosocomes (Macerata, Ancona) and suspending the outpatient and surgical activity. From March 24, 2020, I therefore started to work as an internist-type ward in shifts of medium-low care intensity, with a shift of 8 hours a day. During my shift, I was also called to perform urological consultations for positive COVID19 patients hospitalized in the various wards of the hospital; during my activity in the hospital, I did not have any requests for some andrological advice.

In addition to the hospital activity, I continued my andrologist activity by activating an online consultancy function with video consultations: this activity has proven to be safe, effective and pleasing to the patients who have used it. During this activity, I received five requests for advice for erectile deficit mainly of achievement, of moderate severe degree, of recent onset. The cause of these deficits is often psychogenic, probably linked to the state of prostration, inhibition that this pandemic and this period of quarantine is causing in many people. Therefore, it is important not to increase the patient's concern or treat him as an organic erectile deficit, but to deepen the diagnosis if it persists even after the lockdown phase.

## CONCLUSION

Italy is still paying the price of a delay in the management of the pandemic fueled by first conflicting messages sent by virologists, epidemiologists and politicians. The high rate of contagiousness and mortality in our regions have depended both on the disinformation of the experts and the unpreparedness of the Italian health system in limiting the spread of the virus (lack of departments with dedicated personnel, lack of specific material and equipment). In a globalized world in order to defeat an anti-globalization virus, we need cooperation among all countries, for example the exploitation of telematic technology has allowed us to quickly compare each other and share our experiences to try to counter the spread of the infection. Certainly a global effort to share information in the medical field will be effective in defeating COVID-19.

The lack of epidemiological data on andrological pathologies in the lockdown period stimulated us to expose our experiences which, in addition to an interruption of the specialist activity in hospital structures, highlighted above all the phlogistic andrological pathologies that had been managed in a private setting.

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