WEBINAR

BLEEDING DISORDERS AND COVID-19
THE FACTS AND RISKS TO PERSONS WITH BLEEDING DISORDERS

Glenn Pierce, MD, PhD
Flora Peyvandi, MD, PhD
Magdy El Ekiaby, MD
Cedric Hermans, MD, PhD
Radoslaw Kaczmarek, PhD

Thursday, 9 April 2020
SPEAKERS & PANELISTS

Glenn Pierce, MD, PhD
Flora Peyvandi MD, PhD
Magdy El Ekiaby MD
Cedric Hermans MD, PhD
Radoslaw Kaczmarek PhD
AGENDA

- The facts and risks to persons with bleeding disorders
  
  Glenn Pierce, MD, PhD

- The clinical picture from the front lines
  
  Flora Peyvandi, MD, PhD

- Preparations in Egypt and similar countries
  
  Magdy El Ekiaby, MD

- Questions & answers period
  
  Speakers and Cedric Hermans, MD, PhD, Radoslaw Kaczmarek, PhD
WFH COVID-19 STATEMENTS

- Practical recommendations
- Specific risks of COVID-19
- Humanitarian aid news
- Company statements

Specific Risks of COVID-19 to the Bleeding Disorders Community

World Federation of Hemophilia - April 2, 2020
Also available in: Español, Français

https://www.wfh.org/en/home
WFH AND ISTH WEBINARS

Both webinars will be recorded.
The WFH Webinar will be available on the WFH website. Translations will be available soon.
If you have not sent your question to research@wfh.org, you can ask a question in the Question & Answers section. We will address as many questions as time allows.
THE FACTS AND RISKS TO PERSONS WITH BLEEDING DISORDERS

GLENN PIERCE, MD, PhD
Vice President, Medical,
WFH
La Jolla, California, USA
What We Know

• COVID-19 caused by recently found SARS-CoV-2 (or coronavirus). First known outbreak originated in Wuhan, China December 2019
• Related to SARS-CoV-1 and MERS, and coronaviruses that cause the cold and flu
• Symptoms appear 2-14 days post-exposure; ~20% or more asymptomatic
• ~80% recover without treatment; 20% hospitalized; ~5% need ventilator/ICU; ~2% mortality

HIGH FEVER
The body temperature can exceed 37.3 Celsius degrees or 99 Fahrenheit degrees

TIREDNESS
The body feels completely tired and without energy to perform normal tasks

DRY COUGH
Irritation and constant coughing without expelling any mucus

DIFFICULTY BREATHING
In severe disease, pneumonia develops, D-dimers elevated, ARDS and DIC may develop


WFH 9 April 2020
Snapshot of the Global Pandemic

Confirmed cases of Covid-19 for selected countries
Showing the number of cases since the day of the 100th case, using a log scale.
Data correct at 23:59 UTC 6 April

Confirmed cases of Covid-19
Data correct at 23:59 UTC 6 April

Deaths 88,350
1,513,994

Source: Johns Hopkins CSSE
Note: The CSSE states that its numbers rely upon publicly available data from multiple sources.

https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/
https://coronavirus.jhu.edu/map.html

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COVID-19 Pandemic: Practical Recommendations for People with Hemophilia

• For PWH currently treated with standard or extended recombinant half-life FVIII or FIX concentrates, FEIBA, FVIIa, or emicizumab:
  • No reason to change treatment regimen
  • No reason to fear shortage of treatment supplies, manufacturing issues or interruption in the supply chain
  • Contact HTC if stock at home or at hospital is limited
  • If you treat at home, a few extra doses for home use in case of delivery delays or disruptions.

For PWH treated with plasma-derived FVIII/FIX

- Viral inactivation and elimination procedures employed sufficient to destroy lipid-enveloped viruses like SARS-CoV-2
- Maintain treatment regimen
  - No supply disruptions in plasma-derived product. Decrease in plasma collections at front end of the 6-9 month plasma-derived product production
  - Blood and plasma donations are a safe process, and need is high
  - All HTCs and blood and plasma collection centres follow guidelines to protect personnel and donors to prevent the spread of SARS-CoV-2 via respiratory droplets and fomites
  - If blood-derived products not virally inactivated (e.g., cryoprecipitate, platelets), base treatment decisions on clinical risk/benefit analysis balancing safety of not treating a bleeding event and residual risk of acquiring infection

Severe Acute Respiratory Syndrome Coronavirus 2 RNA Detected in Blood Donations

Le Chang¹, Lei Zhao¹, Huafei Gong, Lunan Wang², and Lan Wang²

Author affiliations: National Center for Clinical Laboratories, Beijing Hospital, National Center of Gerontology; Institute of Geriatric Medicine, Chinese Academy of Medical Sciences, Beijing, China (L. Chang, Lunan Wang); Blood Center, Wuhan, China (L. Zhao, Lan Wang); Shanghai Haoyuan Biotech Co., Ltd, Shanghai, China (H. Gong); Peking Union Medical College Graduate School, Chinese Academy of Medical Sciences, Beijing (Lunan Wang)
For PWH currently in clinical trials

- Contact your HTC to discuss implications of the pandemic
- Ensure availability of study drugs and that the treatment is not interrupted
- Discuss follow-up/monitoring with an HTC study team. Remote follow-up visits strongly encouraged
- If on gene therapy trial (≤12 months after infusion), scheduled liver function testing remains a priority for safety and efficacy
- Do not discontinue or switch treatment if receiving a clinical trial drug unless directed by the study team
- For PWH who are scheduled to be enrolled in a trial testing a new treatment
  - Postponement should be discussed with the study team
- Many medical centres have banned initiation of new clinical trials to deal with the pandemic
- Sponsors should proactively discuss options with clinical sites

Specific measures to reduce exposure of SARS-CoV-2 in PWH

- People with bleeding disorders and comorbidities (cardiovascular disease, hypertension, obesity, diabetes, HIV, old age), or on steroids or other powerful immunosuppressant drugs are especially vulnerable
- Avoid exposure to everyone, including lower risk individuals and children, is the single most important precaution to avoid infection. Sheltering in place and social distancing are the most important tools
- Proportion of infectious but asymptomatic people uncertain, but may be 20% or more. If going into closed space, appropriate masks are essential (N/KN95>surgical>cloth)
- Minimize visits to hospitals or doctor offices
- Paracetamol (acetaminophen) reduces fever without inhibiting inflammatory response needed to fight coronavirus, recommended for persons with bleeding disorders
  - Paracetamol (acetaminophen) should not exceed 60mg/kg/day or 3g/day
- Remember, frequent 20 second hand washing with soap, avoid face, don’t aerosolize cough, and maintain 2 metres (6 feet) distance: key to prevent transmission

If hospitalized with COVID-19 infection

• Good liaison between the hospital where patient is admitted and the HTC
• Arrange replacement therapy
• Inform team taking emicizumab (risk of mis-interpretation of hemostasis lab tests)
• Inform if you are part of an ongoing experimental treatment with rebalancing agents (anti-TFPI and fitusiran) and you have a risk of thrombosis or other clotting system imbalances, or you’ve undergone a recent treatment with gene therapy. HTC involvement is critical
• If you have COVID-19 infection, increased prophylaxis and clotting factor levels as precaution against bleeding from potentially severe damage inflicted by SARS-CoV-2

Risks of acquiring SARS-CoV-2 (the virus) and COVID-19 (the disease)

• No increased susceptibility to infection in immunocompetent persons with bleeding disorders. SARS-CoV-2 passed primarily through droplets in the air coming from infected persons and fomites.

• If infected, immunocompromised people at greater risk for severe disease. For HIV, that includes:
  • Low CD4 T-cell count (e.g., <200)
  • People not on antiretroviral HIV treatment
  • With other underlying diseases associated with severe COVID-19

Risks if COVID-19 infection with a bleeding disorder

- **Risk factors** include hypertension, diabetes, cardiovascular disease, and immunosuppression. Current evidence does not support changes in the management of hypertension.
- As COVID-19 progresses, coagulation pathways activated as part of the host inflammatory response to limit infection. **D-dimers elevated** in many hospitalized COVID-19 patients.
- Further progression - disseminated intravascular coagulation (**DIC**), high mortality. Part of systemic inflammatory response to both virus and damaged tissue.
- **Close monitoring** for bleeding and thrombosis if DIC. If observed, report.
- Anticoagulants (e.g., low molecular weight heparin, LMWH) recommended for some patients with elevated D-dimers and severe infection. **Use of anticoagulants** should be accompanied by factor replacement therapy.
COVID-19 Coagulopathy

BRIEF REPORT

Abnormal coagulation parameters are associated with poor prognosis in patients with novel coronavirus pneumonia

Ning Tang¹ | Dengju Li² | Xiong Wang¹ | Ziyong Sun¹

¹ Department of Clinical Laboratory, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China
² Department of Hematology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

Abstract

Background: In the recent outbreak of novel coronavirus infection in Wuhan, China, significantly abnormal coagulation parameters in severe novel coronavirus pneumonia (NCP) cases were a concern.

Objectives: To describe the coagulation feature of patients with NCP.

Results: The overall mortality was 11.5%, the non-survivors revealed significantly higher D-dimer and fibrin degradation product (FDP) levels, longer prothrombin time and activated partial thromboplastin time compared to survivors on admission (P < .05); 71.4% of non-survivors and 0.6% survivors met the criteria of disseminated intravascular coagulation....
Non-factor replacement therapies

- Risk of thrombotic complications with non-factor replacement therapies including emicizumab or other investigational agents (e.g. fitusiran, anti-TFPI) is unknown in COVID-19
- In individuals receiving emicizumab, how the drug may interact with COVID-19 coagulopathy requires close monitoring for thrombosis
- Prophylaxis should be continued with emicizumab
- Patients should be assessed for need for additional clotting factor replacement therapy
- Anticoagulants may be considered as per recommended treatment protocols
- In patients with FVIII inhibitors receiving emicizumab, extra precautions if aPCC needed due to the known drug-drug interaction
- Investigational agents: speak with study sponsor

https://www.hemlibra.com/hcp/safety.html?c=hea165155ea50d&gclid=EAIaIQobChMI7sT20bvG6AIVlddkCh3lFAG0EAYASACEgl-2vD_BwE&gclsrc=aw.ds
Bleeding disorders are not co-morbidities in severe COVID-19

• Patients with bleeding disorders of all severities and COVID-19 should be eligible for all available therapies required depending on their condition (e.g., ventilation support, ECMO, hemofiltration)

• Having hemophilia should not exclude individuals from invasive management of COVID-19
WFH Humanitarian Aid program
IMMEDIATE preventive measures implemented 1 April 2020

Closed airports, disrupted supply lines

Send ASAP an email/letter to all recipient countries to monitor and better control their existing stock.

Suggest to stop ITI, elective surgery, prophylaxis for adults and then children till further notice, to preserve stock.

Increase, where possible, donations to all countries in order to build or maintain stock.

Ahaffar@wfh.org
Avoid this infection

- Hygienic protocols
  - Handwashing frequently
  - Don’t touch face
  - Consider surfaces as potentially contaminated
- Gloves as needed
- Face masks whenever in closed spaces outside home
- Health-care providers- please be careful and thank you!

COVID-19
CLINICAL CHARACTERISTICS, DIAGNOSIS AND TREATMENT

FLORA PEYVANDI MD, PHD
ANGELO BIANCHI BONOMI
HEMOPHILIA AND THROMBOSIS CENTRE - IRCCS POLICLINIC UNIVERSITY OF MILAN ITALY
AGENDA

1. COVID19: Transmission and clinical presentation
2. Diagnosis
3. Treatment
COVID-19

December 2019:
• Chinese scientists identified a novel coronavirus as the main causative agent of an acute respiratory syndrome in Wuhan City (SARS-CoV-2), previously known as 2019-nCoV
• It rapidly spread, resulting in an epidemic throughout China, with sporadic cases reported globally

February 2020:
• WHO designated the disease coronavirus disease 2019 (COVID-19)

March 2020:
WHO announces COVID-19 outbreak a pandemic
Understanding of COVID-19 is evolving
Epidemiology

- Globally more than a million confirmed cases of COVID-19 have been reported
- Coronavirus disease (COVID-19) represents global public health concern and WHO declares public health emergency
- Special attention is necessary to protect or reduce transmission in susceptible populations
<table>
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https://www.who.int/
## The situation in Italy: 7 April 2020 time 18.00

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<th>POSITIVE CASES</th>
<th>DEATHS</th>
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<td>94067</td>
<td>17127</td>
<td>24392</td>
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</table>

http://www.salute.gov.it/
Transmission

- **COVID19 person-to-person** spread is thought to occur mainly via respiratory droplets and close contact, resembling the spread of influenza.

- Transmission of COVID-19 could occur also with **asymptomatic individuals** (or individuals within the incubation period).

- The **incubation period** for COVID-19 is thought to be **within 14 days** following exposure, with most cases occurring approximately five days after exposure.
References:
Clinical presentation

• Most infections are not severe, although many patients have had critical illness

• Pneumonia appears to be the most frequent serious manifestation of infection, characterized primarily by fever, cough, dyspnea, and bilateral infiltrates on chest imaging

• The overall case-fatality rate reported to be 2.3 percent

• No deaths were reported among non-critical cases
Clinical presentation

• As disease progressed, a series of complications tend to develop, especially in critically ill patients.

• Pathological findings showed representative features of acute respiratory distress syndrome and involvement of multiple organs.
Comorbidities that have been associated with severe illness and mortality include

- **Cardiovascular disease**
- **Diabetes mellitus**
- **Hypertension**
- Chronic lung disease
- **Cancer**
- Chronic kidney disease
Laboratory

• **The white blood cell count can vary**: leukopenia, leukocytosis, and lymphopenia have been reported, although **lymphopenia** appears most common.

• **Elevated aminotransferase** levels have also been described.

• On admission, many patients with pneumonia have **normal serum procalcitonin levels**. However, in those requiring intensive care unit (ICU) care, they are more likely to be elevated.

• Laboratory markers indicating increased inflammation and clotting activation as **high d-dimer, decreased platelet count, and PT prolongation** have negative prognostic value.

• In our experience patients affected with COVID have hypercoagulability which differs from DIC and requires further investigation.

**Diagnosis: test for SARS-CoV-2**

- In the US, the CDC recommends collection of specimens from:
  - the upper respiratory tract (nasopharyngeal and oropharyngeal swab)
  - the lower respiratory tract (sputum, tracheal aspirate, or bronchoalveolar lavage)
- SARS-CoV-2 RNA is detected by polymerase chain reaction
- A positive test confirms the diagnosis of COVID-19

If initial testing is negative but the suspicion for COVID-19 remains, the WHO recommends resampling and testing from multiple respiratory tract sites.

Negative RT-PCR tests on oropharyngeal swabs despite CT findings suggestive of viral pneumonia have been reported in some patients who ultimately tested positive for SARS-CoV-2.
Performance of COVID-19 RT-PCR?

• Test performance is unclear; it is impossible to sort out in the absence of a definitive “gold standard” diagnostic test for COVID-19

• Specificity seems to be high

• Sensitivity may not be terrific (60-70%, data from case series)

• A single negative RT-PCR *doesn't* exclude COVID-19 *(especially* if obtained from a nasopharyngeal source and if taken relatively early in the disease course)

• If negative, ongoing isolation and re-sampling should be considered
Management at the IRCCS Ca' Granda Opedale Maggiore Policlinico, Milan, Italy

Patient admitted to ER with suspicion for COVID19

**Influenza-like illness** (no hospitalization suggested by ER clinician)
- Fever
- Malaise
- Headache
- Myalgia

- Cough
- Sore throat
- Dyspnea

- **NO NASAL SWAB**

Discharge – domestic quarantine – contact with family doctor

**Severe acute respiratory infection** (hospitalization required by ER clinician)
- Dyspnea
- Desaturation
- Fever
- Asthenia
- Mental confusion

- **ISOLATION and NASAL SWAB**

**Acute respiratory distress syndrome**

- **ISOLATION and NASAL SWAB**

Admission to ICU
**Procedure for NASAL SWAB**

1° test: NEGATIVE

A new test after 12/24h

2° test: NEGATIVE

Discharge or admission to a different unit

1° or 2° test: POSITIVE

Admission and ISOLATION
Chest X-ray

The sensitivity of chest X-ray was found to be **59% among symptomatic patients** presenting to the hospital in one series

Guan et al. N Engl J Med. 2020
Serial CT scans in patient with poor prognosis

- Chest computed tomography (CT) in patients with COVID-19 most commonly demonstrates **ground-glass opacification with or without consolidative abnormalities**, consistent with viral pneumonia.

- Case series have suggested that chest CT abnormalities are more likely to be **bilateral, have a peripheral distribution**, and involve the lower lobes.

*Figure 5: Transverse thin-section serial CT scans from a 77-year-old man*

(A) Day 5 after symptom onset: patchy ground-glass opacities affecting the bilateral, subpleural lung parenchyma. (B) Day 15: subpleural crescent-shaped ground-glass opacities in both lungs, as well as posterior reticular opacities and subpleural crescent-shaped consolidations. (C) Day 20: expansion of bilateral pulmonary lesions, with enlargement and denser pulmonary consolidations and bilateral pleural effusions (arrows). The patient died 10 days after the final scan.
• The disease has distinct phases

• Treatment will differ as patients move through these phases
It is strongly recommended in patients with symptoms of respiratory distress

It is not necessary for patients with oxygen saturation (SpO2) of more than 93% or for patients without obvious symptoms of respiratory distress without oxygen treatment

It should be noted that some severe patients with PaO2/FiO2< 300 had no obvious symptoms of respiratory distress
Interfaces

Hood

Masks
Stage I (Early Infection) - Viral response phase

Stage II (Pulmonary Phase)
- IIA
- IIB

Stage III (Hyperinflammation Phase)

Severity of Illness

Time course

Clinical Symptoms
- Mild constitutional symptoms
  - Fever >99.6°F
  - Dry cough, diarrhea, headache

Clinical Signs
- Lymphopenia, increased prothrombin time, increased D-Dimer and LDH (mild)
- Shortness of Breath
- Hypoxia (PaO2/FiO2 ≤ 300 mmHg)
- Abnormal chest imaging
- Transaminitis
- Low-normal procalcitonin
- ARDS
- SIRS/Shock
- Cardiac Failure
- Elevated inflammatory markers
  - (CRP, LDH, IL-6, D-dimer, ferritin)
  - Troponin, NT-proBNP elevation

Potential Therapies
- Remdesivir, chloroquine, hydroxychloroquine, convalescent plasma transfusions
- Reduce immunosuppression
- Corticosteroids, human immunoglobulin, IL-6 inhibitors, IL-2 inhibitors, JAK inhibitors
Identification of novel drugs for treating COVID-19 infections is urgently warranted.

There is a need to do (treat the patients) and learn (testing therapies at the same time) and this is the biggest challenge.
Acknowledgement

Collaborators and colleagues at the Angelo Bianchi Bonomi Hemophilia & Thrombosis Center Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlinico, Milan, Italy
PREPARATIONS IN EGYPT AND SIMILAR COUNTRIES

MAGDY EL EKIABY, MD
SHABRAWISHI HOSPITAL
CAIRO, EGYPT
Agenda

• COVID-19 in Egypt
• Hemophilia Care current situation
• Egyptian Society of Hemophilia
Egypt containment of COVID-19

- Closure of Borders
- Social distancing
- Confinement of suspected cases
- Health services
Percentage of infected persons of the population: 0.0015%
فيروس كورونا المستجد

فيروس كورونا المستجد (COVID-19) هو فيروس جديد ضمن فصيلة كبيرة تسمى الفيروسات الناجية "كرونا" والتي تسبب الجهاز التنفسي وتتراوح حدتها من نزلات البرد الشائعة إلى الأمراض الأشد خطورة مثل "سارس" و"ميرس". ولم يتم اكتشاف علاج لـ "โคفيدي-19" حتى الآن.

في عدد المصابين بالفيروس
من بين 211 منطقة و دولة حول العالم

في نسبة الوفيات من إجمالي عدد المصابين
من حيث إجمالي الإصابات بها لكل مليون نسمة

والتي بالإضافة إلى كل الدول والمناطق على مستوى العالم التي ظهرت بها حالات إصابة حتى الآن

Hemophilia situation in Egypt

- No reported cases of COVID-19 among patients with IBDs
- The standard of care is still based on episodic treatment (very limited prophylaxis programs)
- Few patients are on Hemlibra
- No patients are on gene therapy clinical trials or other types of trials

IBDs, inherited bleeding disorders
Hemophilia situation in Egypt

- There is a stock of CFCs at main warehouse of MoH dedicated to patients under HIO coverage and ministerial partial subsidy decrees
- A big donation from WFH HA program was received early this year and still a good amount is in stock
- Although there is a decree to give 3 months supplies of medications to chronic patients, yet at HIO, CFCs are considered as biological products and so they still request to be given at HTCs
Hemophilia situation in Egypt

- PWH have great concerns to go to hospitals for possible risk of infection with SARS-CoV-2
- In addition some of health insurance hospitals that have HTCs, are planned to be converted to COVID-19 isolation hospitals, which may reduce accessibility of Hemophiliacs to HTCs and consequently CFCs
- Two centers who have cohorts of patients on prophylaxis provide the monthly dosage to the families to be administered at home
• ESH launched a social media campaign to educate PWH about COVID-19 and precautionary measures to prevent infections

• Arabic translation of WFH HA guidance document was posted on the ESH website and through social media

• A letter advocating for CFCs home therapy during the epidemic period was sent to HIO with active follow up

• Active patient groups submitted a request to prime minister to allow for home therapy during the epidemic period
Egyptian Society of hemophilia (ESH) in response to COVID-19

- ESH is actively participating in WFH Webinars and guidance documents on COVID-19 and communicate it to the patients
- Many patients have concerns about blood safety and some questions regarding CFC therapy in hemophiliacs who may be infected with SARS-CoV-2 or develop COVID-19 is on the radar of ESH
- Once informed of any hemophiliac who develops COVID-19, ESH will be in contact with health authorities to advise through its medical advisory board on prophylaxis from possible bleeding, control of any bleeding episode and supply of CFCs when needed
Egyptian Society of hemophilia (ESH) in response to COVID-19

- ESH provides home therapy to patients in need through HA products
- There is an ongoing discussion with one pharmaceutical company to support shipping of CFCs from ESH warehouse to patients in need by courier
- ESH is planning social media activities with focus on management of hemophilia with the current situation on WHD
EMR COVID-19
WFH EMR in Response to COVID-19

Why is the Middle East less affected by coronavirus?
From: ahmed Bahi
Sent: Wednesday, April 01, 2020 04:21
To: Rana Saifi

Subject: Re: Current Situation in Qatar: WFH Recommendations for Management of PWH During the COVID-19 Pandemic

Dear Miss Rana,

I hope my email finds you well. Thanks a lot for your commitment to take care of hemophilia patients worldwide during such pandemic of COVID-19. Here are the reply of Qatar Hemophilia Groups scientific committee to your concerns:-

-1- Diagnosis and treatment centers are adopting telemedicine for outpatient clinics to ensure treatment services is not interrupted while reducing risk of subjecting patients to nosocomial infections. In case of emergency they still encouraged to go to hospital.
Dear Colleagues,

The World Federation of Haemophilia issued special recommendations related to the management of persons with hemophilia (PWH) during COVID-19 pandemic. A big problem in much of the countries in the WHO eastern Mediterranean Region at present is that PWH are not provided with home treatment. Measures taken to control the pandemic may not allow PWH and/or their caretakers to visit hospitals to pick up their medicines, i.e., Clotting Factor Concentrates (CFCs). Unfortunately, in some cases, they were told to go twice a day to collect medicines. This will increase the risk of exposure to COVID-19. In addition, some countries are beginning to impose curfews and the PWH/caretakers will not be able to leave their homes.

In this regard, it would be most helpful if Ministries of Health provide guidance to haemophilia treatment centers to provide PWH/caretakers with home therapy of CFCs to have enough therapy for their bleeding episodes for extended period. This will reduce unnecessary risk of exposure to COVID-19 and as well to cope with situations of possible curfews in the countries.

Please also find below the link to the official statement of World Federation of Haemophilia on COVID-19.

Best regards,

Dr. Yetmgeta E. Abdella
Medical Officer, Blood and other Products of Human Origin
Access to Medicines and Health Technologies
THANK YOU

Information current as 8 April 2020.
Check links for most up-to-date knowledge
QUESTION & ANSWER PERIOD

GLENN PIERCE, MD, PHD, FLORA PEYVANDI, MD, PHD, MAGDY EL EKIABY, MD, CEDRIC HERMANS, MD, PHD, RADOSLAW KACZMAREK, PHD
QUESTIONS – Hemophilia & COVID-19

• Are people with hemophilia (PWH) more susceptible to COVID-19 (high-risk group)?

• Does COVID-19 affect PWH differently than others? What about PWH with hepatitis C?

• Are there any reported cases of COVID-19-positive PWH? If so, did the person show any symptoms that are uncommon?
QUESTIONS – Bleeding

• If a PWH tests positive for COVID-19, what is the probability of internal bleeding:
  • To the lungs or kidney?
  • To the trachea (due to the severe dry coughing)?

• If tested positive to COVID-19, can a PWH go to their HTC for a bleed or should they go to the ER?

• If tested positive to COVID-19, what are the risks of thrombotic complications occurring in a PWH?
QUESTIONS – Hemophilia Treatment

• Should PWH administer factor if tested positive to COVID-19? Any specific treatments for PWH with inhibitors?

• What should PWH on Hemlibra or similar products be aware of if tested positive for COVID-19?

• What should PWH on gene therapy or trials be aware of if tested positive for COVID-19?

• In the current situation, should PWH receiving treatment at a hospital request home treatment (if possible)?
QUESTIONS – COVID-19 Treatment

• If tested positive to COVID-19, what medicines (such as acetaminophen, ibuprofen) can a PWH take?

• Is it advisable to use heparin if required for COVID-19 treatment?

• Have COVID-19 patients required chest drains? Is this problematic for a PWH?

• If tested positive for COVID-19, have PWH requiring admission to ICU been able to receive CFC prior to arterial lines etc. being put in?
QUESTION – Treatment safety and supply

• Can the virus be transmitted through fresh frozen plasma/ cryoprecipitate? Are current manufacturing processes killing the virus?

• Will access to plasma products be affected?

• Do you foresee a shortage of treatment products?

• Could a country order a manufacturer to stop exporting their products?
QUESTION – Other bleeding disorders

• How does COVID-19 affect other bleeding disorders (vWD, rare factor deficiencies, etc.)?
  • Bleeding risk, treatment

• Are other bleeding disorders patients at increased risk of COVID-19?
QUESTION – Protective measures

• How can PWH protect themselves from coronavirus infection? For how long should PWH quarantine themselves at home?

• Should care provider take any special precautions?

• What is the difference between confinement and quarantine?
QUESTION – Other

• What can I do to help?

• I am very worried about the situation, what can I do to worry less?
ACKNOWLEDGEMENTS

• Angelo Bianchi Bonomi
  Hemophilia & Thrombosis Center
  Milan, Italy

• Fondazione IRCCS Ca’ Granda
  Ospedale Maggiore Policlinico
  Milan, Italy

• Shabrawishi Hospital
  Cairo, Egypt
STAY SAFE
THANK YOU!

research@wfh.org