The Provision of Dialysis for Patients Post-COVID Diagnosis

May 21, 2020

Welcome & Opening Remarks

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Northwest Kidney Centers
Our Patient Is Back! What Do We Do?

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Director of Nursing and Clinical Services
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Case Study #1 – Mr. RM

Mr. RM is a 22-year-old male with two failed kidney transplants. He resumed hemodialysis treatments in February 2020:
- Intubated due to hypoxia and pneumonia for 6 days.
- Tested positive for Covid-19.
- Discharged on day 16 and returned to outpatient hemodialysis.
Case Study #1

• He resumed outpatient dialysis treatments and was kept on the positive shift as he presented with low grade fevers.
• Due to a drop in hemoglobin and transplant allograft pain, he was readmitted to the hospital.
• On discharge, he returned to outpatient dialysis still on the positive shift due to low grade fever. Today is day 59 with symptoms!

COVID-19 in Dialysis Patients

• As of May 11:
  • Of 500,000 dialysis patients in the US, 13,043 are infected (2.61%).
  • In New York State, of about 49,000 dialysis patients, 2,828 patients have been infected (5.77%).
  • At Rogosin, we had 1,559 patients on February 28, 2020; to date, 241 have been infected (15.46%).
Rogosin Data

241 cases: 98.8% confirmed; 1.2% presumed
Distribution:

<table>
<thead>
<tr>
<th>Location</th>
<th>Patients (2/28)</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brooklyn (5 Units)</td>
<td>691 (44%)</td>
<td>106 (44%)</td>
</tr>
<tr>
<td>Manhattan (2 Units)</td>
<td>479 (31%)</td>
<td>58 (24%)</td>
</tr>
<tr>
<td>Queens (2 Units)</td>
<td>389 (25%)</td>
<td>67 (28%)</td>
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Mortality

- In New York City:
  - Brooklyn 50,331 cases; 6,064 deaths (12.05%)
  - Manhattan 24,191 cases; 2,485 deaths (10.27%)
  - Queens 57,391 cases; 5,851 deaths (10.20%)
- For dialysis patients, mortality has been estimated between 6.9% and 20%.
- Rogosin, mortality is 55 of 241 infected patients 22.82%.
What Did We Do With COVID-19 + and PUI Patients

- We aggressively tried to stop the infection spreading within the dialysis units:
  - Patients are asked to call ahead if they have symptoms
  - Patients are screened on arrival at the unit for temperature and respiratory symptoms
  - All patients wearing masks on dialysis
  - Social distancing in the waiting areas
- We had the staff wear all the extra PPE’s we could get our hands on (face shields, KN95 masks, impermeable gowns, head coverings, bootees).
- Masks on at all times in the dialysis unit for all staff.
- Positive and PUI Patients cohorted on a shift, away from negative patients.
- Covid-19 positive patients cohorted separately from PUI patients with separate staff taking care of them.

Barriers to Testing

- No testing for patients outside of the hospital setting.
- Difficult to find N95 masks to purchase, only KN95 masks.
- Fit testing not available, kits on back order.
Without Testing, How Do We Decide to Move the Patients Back to Their Shifts

- Using a very conservative symptom and time-based strategy for this decision making.
- We followed the CDC and NYS DOH recommendations.

Nursing assessment became key is eliciting symptom details from patients. Not just well-known symptoms such as fever, fatigue and cough, but also:
- Whether the patient was feeling better and assessing them over time to see if they were getting better.
- Digging a little deeper into their symptoms such as asking if they were still taking antipyretics for any reason, not just fever e.g. headache, any difficulty breathing including when walking.
What Did We Find

• Patients took a lot longer to feel better than we expected.
• Many patients had symptoms for up to 4 weeks and some up six weeks.
• Once the patient felt better, had improved symptoms and met the CDC criteria, they were moved back to dialyze in their regular dialysis spots.

Case Study #2 – Mrs. CL

Mrs. CL is a 77-year-old female who was hospitalized on 3/23/20 with fever, SOB and cough:
• Despite treatment her breathing worsened and she became unresponsive with oxygen saturation levels 70%—80%.
• Patient had stated her wish to be DNR/DNI, so she was treated with comfort measures.
• Her respiratory issues resolved and she continued with hemodialysis in the hospital (with some altered mental status).
Case Study #2

• On 4/3/20 she was discharged from the hospital to subacute rehab where she remained until discharge on 5/12/20.

• She returned to the dialysis unit and was given a round of applause!

• Patient did not have a retest but she had been asymptomatic, she was returned to her regular dialysis spot.

What Next

• NYS DOH is requiring testing on all nursing home patients twice a week so we will know going forward the status of patients returning from rehab.

• Hospital patients who have been returning without a recent test – we will request one.

• For the dialysis unit, some patients may have more access to testing as sites open up in Manhattan using an appointment system, so we can schedule patient transportation to and from the site.
CDC Recommendations

SHANNON NOVOSAD, MD, MPH
The Centers for Disease Control and Prevention

National Center for Emerging and Zoonotic Infectious Diseases

Discontinuation of Transmission-Based Precautions

Shannon Novosad, MD MPH
May 21, 2020
Transmission-Based Precautions (TBP) Discontinuation Strategies

- Decisions to discontinue TBP for patients with confirmed COVID-19 should be made using either:
  - Test-based strategy
  - Symptom-based strategy
    - i.e. time-since-illness-onset and time-since-recovery
  - Time-based strategy

- Meeting criteria for discontinuation of TBP is not a prerequisite for dialysis
Symptomatic Patients with COVID-19

- Symptom-based strategy
  - At least 3 days (72 hrs) have passed since recovery
    - Recovery defined as resolution of fever without use of fever-reducing medications and improvement in respiratory symptoms (e.g., cough, SOB) and
  - At least 10 days have passed since symptoms first appeared

OR

- Test-based strategy
  - Resolution of fever without the use of fever-reducing medications and
  - Improvement in respiratory symptoms (e.g., cough, shortness of breath), and
  - Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens)

Asymptomatic Patients with Laboratory-Confirmed COVID-19

- Time-based strategy
  - 10 days have passed since the date of their first positive COVID-19 diagnostic test, assuming they have not subsequently developed symptoms since their positive test

OR

- Test-based strategy
  - Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens)
Discontinuation of Empiric TBP for Patients Suspected of Having COVID-19

- Negative results from at least one FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA
  - If a higher level of clinical suspicion for COVID-19 exists, consider maintaining TBP and performing a second test for SARS-CoV-2 RNA

- If a patient suspected of having COVID-19 is never tested, the decision to discontinue TBP can be made based upon using the *symptom-based strategy* described previously

- Clinical judgement and suspicion of SARS-CoV-2 infection determine whether to continue or discontinue empiric TBP

Challenges, Uncertainties, and Judgment calls

- Repeated positive tests over an extended time period (i.e., prolonged shedding)

- In the context of a symptom-based strategy, the patient tests positive again at some point after resolution of symptoms  
  – Does this require a shift to test-based strategy?

For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348  
www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
CMO Observations: Transitions for COVID-19+ Patients: How are Patients Welcomed Back to the Unit?

BRIGITTE SCHILLER, MD, FACP, FASN
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Satellite Healthcare
San Jose, CA

Realities for Patients Diagnosed with COVID-19

- Fear - Anxiety for oneself and loved ones - Discrimination
- Asked to dialyze in a different center
  - Loss of familiarity of center, staff, fellow patients
  - Meeting new care team
    - Masked – in PPE
      - Lack of human connection
      - Staff is nervous
- Challenging start!
COVID-19 Patients Dialysis Care

- Isolation room
- Dedicated shift – center
- Clinical support
  - Pulse-oximetry added to pre- and post-dialysis vital signs

Resolution of COVID-19

- Test-based
  - 2 negative tests ≥ 24 hours apart
- Symptom-based – time-based
  - Fever-free without any antipyretics
  - Improvement in respiratory symptoms
  - 7, 14, 10 days
Resolution of COVID-19 status

• If testing is available: Patient should meet all 3 criteria
  1) TWO negative results ≥ 24 hours apart AND
  2) Resolution of fever without use of fever-reducing medications AND
  3) Improvement in respiratory symptoms (i.e., cough, SOB)

• If testing is not available: Patient should meet all 3 criteria
  1) ≥ 72 hours resolution of fever without the use of fever-reducing medications AND
  2) ≥ 72 hours significant improvement in respiratory symptoms including cough,
     shortness of breath AND
  3) ≥ 14 Days since symptoms first appeared

Patient transitioning to standard shift/center

• All patients continue to wear a mask
• Resume patient’s regular shift and time
• Follow standard P&P for infection prevention

If patient lives in multi-residence facility and ongoing exposure is likely* patient treated as a PUI with testing every 2 weeks.

(*Ongoing exposure is defined as a multi-residence facility that does not isolate COVID+ patients in a different location with dedicated staff.)
Returning to outpatient dialysis after hospitalization for COVID19 disease

- Clinical variation of practice dependent on hospitals
  - Testing negative prior to discharge
  - Symptom-based resolution

- Clinical evaluation through a physician to physician discussion to ensure clinical stability
  - Discharge planner, case manager
  - Facilitate the logistics for return for patient and care team

How fast can you get a test result?

Average time 3.6 days
Median time 3 days

![Time from collection to result](image_url)
How fast would you like to get a result?

Prior to the next HD treatment – 24 to less than 48 hours

Time from collection to result

Test #  %

Note

Testing is a challenge

➢ Availability
➢ Turn around time
➢ Risk of transmission
  • PPE required
➢ Appropriate sample
Clinical and Virologic Characteristics of US Patients (Jan – Feb 2020)

Viral burden measured in upper respiratory specimens declines after onset of illness

(Midgely 2020, CDC Website)
Time to Resolution of COVID19 + Status

• Average time 28-29 days
• 16 % more than 40 days

➢ More data and understanding is needed.
  ➢ Are patients who remain persistently positive still infectious?
    Or is the PCR just detecting viral fragments?

A new virus – a new disease – patients need us to act quickly!
Organizational-Based Strategies to Mobilize Resources Depending on Regional and Local Needs in the Time of COVID

ROBERT TAYLOR, MD
Sr. Medical Director, REACH Kidney Care
CMO, Music City Kidney Care Alliance

DCI Executive Committee Began Meeting on a Daily Basis in Early March

- Development of a Screening Tool and Tracking Process Allowed Centralized Data Collection
- Lab Testing Updates
- COVID + Patients and Staff
- Patient Care Staffing Issues
- Hospital Services Update
- PPE/Supply Update
- COVID Questions and Hot Topics
- Identify Hard Hit Clinics
- Coordinate Travelers Who Were Traveling to Hard Hit Regions
- Communicate, Communicate, Communicate
Focus on Indicators of COVID Activity

- Daily Test Kit Allocation Call
  - Which clinics have requested kits and how many
  - How many have already been sent, how many have been returned
  - How many positive patients and staff
- Daily Afternoon Testing Updates with Lab Staff
  - How many samples have been returned from clinics in the past 24 hours
  - How many were sent out that day
  - How many extra we have on hand
  - How many were positive and negative

Daily Updates on Patient and Staff Numbers

- Wednesday May 20th
  - DCI Dialysis Clinics
    - 413 COVID + Patients
    - 93 COVID + Staff
  - DCI Hospital Services
    - 644 COVID + Patients
      - 412 Patients with AKI
      - 258 Deaths
      - 210 Patients with AKI
      - 11 COVID + Staff
Carol Stewart, Pam Havermann

• Serve as a clinical and emotional resource for all clinics
• Developed a resource set consisting of FAQ’s with answers
• Developed a resource guide walking through a variety of specific clinical scenarios and how to handle each one
• Identifying where staff were most stretched and how to best address any patient and staffing issues
• Through this regular and open communication it allowed for early identification of clinics that were running low on PPE or other resources
**PPE/SUPPLY UPDATE**

Donovan Schultz and Hal Whetstone Track Use, Current Stockpiles and Project Reserves of Adequate PPE Based on Our Initiatives to Provide the Safest Environment for Patients and Staff

- Gowns
  - How many, what type, where were they located and where shortages may develop
  - What types were acceptable to serve as appropriate PPE
- Masks
  - Regular updates on number of masks on hand both N95 and surgical
  - Regular updates on potential shortages
  - Regular updates on where orders were in relation to accessibility
- Gloves

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**COVID QUESTIONS AND HOT TOPICS**

Dr. Keith Johnson and Dr. Doug Johnson along with the Executive Committee

- On a daily basis address issues that were arising in clinics
  - Why had we chosen a test vs symptom-based strategy
  - Why were we requiring two negative tests before clinic staff could return to work
  - Why are we taking extra precautions with nursing home patients
  - Do we have to wear masks
  - What do we do when patients don’t want to wear masks
  - Why were nurses using 3 gowns for COVID + patients
Which Clinics are Bearing the Brunt of COVID

• Boston MA Hospital Services
• Lahey, MA Hospital Services
• Stony Brook, NY
• Yorktown, NY
• Albany, GA Hospital Services and In-Center

List of Employees Helping in Hard Hit Clinics

• Where they are traveling from and to
• Arrangements that have been made for travelers
  • Who is going, clinical title and dates they will be helping
  • Dates they will return
  • How will the clinic where they are leaving cover for them
  • Testing and counseling needed since they will be traveling from hot spots back to their home clinics
Regular Updates to Physicians, Staff and Operations Personnel on New Initiatives, Reasons for any Changes and Challenges

- Regularly scheduled Webex to update physicians, clinic staff and operations directors on initiatives, challenges
- Allow for Q&A sessions through chat box where anyone can ask questions
- When possible answer questions in real time, if not push more difficult questions to the daily executive committee meetings and follow up questions as quickly as possible
- Weekly COVID 19 email to all employees summarizing weeks activities, numbers on COVID + patients and staff, challenges and yes, successes

Questions

DARLENE RODGERS, BSN, RN, CNN, CPHQ
Nurse Consultant
American Society of Nephrology (ASN)
Closing Remarks

Susan Quaggin, MD, FRCP(C), FASN
Northwestern University