Optimization of Hemodialysis Adequacy for Catheter Connection Configuration with the Transonic Flow-QC® Hemodialysis Monitor — Step One

For Use with Fresenius 5008 Machines

MEASURE DELIVERED BLOOD FLOW RATE

With the bloodlines configured as normally used (document configuration), measure flow.

Transonic delivered blood flow rate (Qb) is higher than the Fresenius 5008 set blood pump speed or within 0-10% lower than the set blood pump speed.

NOTE: Both higher and lower differences are displayed in RED on the Transonic screen.

YES

TRANSONIC DELIVERED BLOOD FLOW RATE (QB) IS HIGHER THAN THE FRESENIUS 5008 SET BLOOD PUMP SPEED OR IS WITHIN 0-10% LOWER THAN THE SET BLOOD PUMP SPEED.

Current blood pump setting is maximizing the Delivered Blood Flow with the current catheter to bloodline configuration.

PROCEED TO RECIRCULATION MEASUREMENT

YES

TRANSONIC DELIVERED BLOOD FLOW RATE (QB) IS HIGHER THAN THE FRESENIUS 5008 SET BLOOD PUMP SPEED OR IS WITHIN 0-10% LOWER THAN THE SET BLOOD PUMP SPEED.

Current blood pump setting is maximizing the Delivered Blood Flow with the current catheter to bloodline configuration.

PROCEED TO RECIRCULATION MEASUREMENT

NO

TRANSONIC DELIVERED BLOOD FLOW RATE (QB) IS >10% LOWER THAN THE FRESENIUS 5008 SET BLOOD PUMP SPEED

Only proceed if both catheter lumens had blood return with treatment initiation.

Using aseptic technique, reverse the catheter configuration by reversing blood lines to the opposite lumens of the catheter than used for the initial measurement. Document configuration.

Repeat the blood flow measurement.

NO

TRANSONIC DELIVERED BLOOD FLOW RATE (QB) IS 10% LOWER THAN THE FRESENIUS 5008 SET BLOOD PUMP SPEED

Carefully document measurement and catheter configurations.

Proceed to recirculation measurements with both catheter configurations.

Escalate the results of the findings to the nephrologist for possible catheter evaluation or prescription adjustment to address catheter dysfunction.

This protocol only applies when using Fresenius 5008 Hemodialysis Machines

Catheter Configurations:

- Normal Configuration: Arterial Catheter Hub to Arterial Bloodline + Venous Catheter Hub to Venous Bloodline
- Reverse Configuration: Arterial Catheter Hub to Venous Bloodline + Venous Catheter Hub to Arterial Catheter Hub

Transonic 1-800-353-3569 Support Line

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Optimization of Hemodialysis Adequacy for Catheter Connection Configuration cont. Step Two

For Use with Fresenius 5008 Machines

CHECK RECIRCULATION

With the bloodlines configured from Step One with maximized Delivered Blood Flow Rate,

MEASURE RECIRCULATION

Recirculation is within 0 - 10%

NO

RECIRCULATION IS GREATER THAN 10%

Only proceed if both catheter lumens had blood return with treatment initiation

Using aseptic technique, reverse the catheter configuration by reversing blood lines to the opposite lumens of the catheter than used for the initial measuremen.

REPEAT RECIRCULATION MEASUREMENT

YES

RECIRCULATION IS WITHIN 0-10%

Current blood pump setting is maximizing the Delivered Blood Flow with the current catheter to bloodline configuration.

NO

RECIRCULATION IS GREATER THAN 10%

Carefully document measurement and catheter configurations.

Escalate the results of the findings to the nephrologist for possible catheter evaluation or prescription adjustment to address catheter dysfunction.

YES

RECIRCULATION IS WITHIN 0-10%

Current blood pump setting is maximizing Delivered Blood Flow with the current catheter to bloodline configuration.

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