

## THE SUCCESSFUL USE OF CRRT IN A PATIENT WITH NECROTIZING FASCIITIS

Presented by: Susan Lauton RN,  
Margaret Lenny RN, BSCN,  
CNCC(c), CCN(c)

## NECROTIZING INFECTION

- Group A Streptococcus
- Attacks the skin and fascia, causing:
  1. tissue destruction
  2. thrombosis of blood vessels
  3. systemic toxicity

- Symptoms: 1. Erythema 2. Hypotension  
3. Pain 4. Fever / Malaise
- Treatment: 1. Surgical exploration and debridement  
2. Antibiotic therapy  
(Clindamycin and Penicillin)  
3. Hemodynamic Support  
4. IVIG

## SEVERE SEPSIS

- Diagnosis is based on SIRS
- SIRS= systemic inflammatory response
- Symptoms: 1. increase RR  
2. increase HR  
3. increase or decrease temperature  
4. increase or decrease WBC  
(at least 2 or more are required to confirm infection)  
5. IN ADDITION an acute dysfunction  
of 2 or more organs

- Treatment: 1. Intubation and ventilation  
2. Massive IV volume  
3. Vasopressors and Inotropes  
4. Antibiotic Therapy  
5. Nutritional Support  
6. Activated Protein C (Xigris)

ACTIVATED PROTEIN C is used to inhibit inflammation, inhibit coagulation, promote fibrinolysis, and balance homeostasis.

## ACUTE RENAL FAILURE

- Sudden onset, rapid deterioration and reversible
- The inability of the kidney to excrete waste, concentrate urine and regulate electrolytes
- Categories
  1. pre renal
  2. intra renal
  3. post renal
- Etiology: interference with the vascular supply to the kidney, such as shock, burns and sepsis.



### ICU DAY 1- DAY 3

- Hypotension (74/40)  
Treatment= 1. fluid boluses 2. packed cells  
3. pentaspan 4. albumin  
5. phenylephrine gtt.
- Contact Precautions
- Antibiotic Therapy
- Temperature 38.9
- WBC 32.9
- U/O less than 20 ml/hr

- Creatine 247
- BUN 8.9
- CVP 16- 20
- Fluid Balance positive by 10.5 liters
- IVIG 140 gm

### ICU DAY 4

- Creatine 288
- BUN 12.1
- U/O less than 20 ml/hr
- Weight increased by 10 kg in the past 48 hrs
- CRRT initiated  
:continuous veno-venous hemodialysis mode  
  
Goal to 1. remove solute and fluid

- 2. Balance electrolytes
- 3. Detoxify the blood
- Other Interventions
  - \* BP stabilized therefore, phenylephrine weaned and discontinued.
  - \* HCO<sub>3</sub> low therefore, bicarb gtt initiated
  - \* Nutritional support by inserting SBFT and Promote feeds initiated.

### ICU DAY 5- DAY 8

- Wound oozing profusely
- Hgb dropped to 54 therefore, treated with PRBC and heparin was discontinued on the CRRT machine
- Temperature was down to 37.9
- WBC was down to 24.5

Renal Improvement:

- 1. creatine was 280, now 128
- 2. BUN was 12.1, now 3.0
- 3. CVP between 8-12
- 4. U/O 40 ml/hr
- 5. fluid balance is 5 litres positive

CRRT WAS DISCONTINUED ON ICU DAY 9

## ICU DAY 10- DAY 12

- Lasix gtt with albumin Q8H was initiated, to facilitate the continuation of fluid removal
- U/O increased to 200 ml/hr
- Temperature normalized
- Weight was being maintained
- CVP was stable between 8-12

On day 12 our patient was extubated

On day 15 she transferred to the medical ward

- She was later transferred to a rehabilitation ward and then discharged home.

## SUMMARY

- 6 OR'S
- 4 CT'S
- 9 units of albumin
- 2 units of FFP
- 10 units of PRBC
- Multiple litres of IV fluid

CRRT WAS COMPLETED FOR 5 DAYS

Intubated and ventilated for 12 days.

In this situation CRRT benefited a sepsis and renal failure patient by:

1. restoring renal function
2. stabilizing electrolytes
3. restoring fluid balance
4. maintaining hemodynamic stability
5. removing endotoxins

LENGTH OF STAY WAS SHORTENED.

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