

# A CASE OF CHRONIC THROMBOTIC THROMBOCYTOPENIC PURPURA- MAINTAINING BALANCE BETWEEN INVENTORY AND PATIENT QUALITY OF LIFE

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# Background

- Treatment of TTP involves utilization of large quantities of plasma with each TPE procedure
- Patients with chronic TTP can present a great challenge to blood centers
  - Maintaining an adequate inventory of plasma

## Methods

### Patient History

- 64-year-old white female
- Blood group AB positive
- Diagnosed with TTP in 1996
- At time of initial diagnosis, she underwent splenectomy
- It was necessary for her to begin TPE as her primary treatment as she remained thrombocytopenic

## Methods

- TPE has been performed on an outpatient basis since 1996 and by our blood center since 2000
- She underwent two courses of rituximab therapy (09/07 and 11/09) in which she was unresponsive to treatment

# Methods

- We wanted to determine if numerous changes that have been made to her TPE frequency and volume exchanged were effective

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 (Jan- May)	2009 (Jun- Dec)	2010 (Jan- Apr)	2010 (May -Dec)
<b>Mean Frequency of TPE procedures/week</b>	2	2	2	3.5	3.5	3.5	3.5	3.5	4.25	4.25	5	5.5	7
<b>FFP units/year</b>	1040	1040	1040										
<b>CPP units/year</b>				1820	1820	1820	1820	1820	2652	1122	1800	1056	3024
<b>Total plasma units/year</b>	1040	1040	1040	1820	1820	1820	1820	1820	2652	1122	1800	1056	3024
<b>Approx. Volume (liters)/year</b>	260	260	260	455	455	455	455	455	663	281	450	264	756
										731		1020	

## Results

### 2000 – 2002

- Procedures were twice per week on average
- Approximately 10 units of plasma per exchange
- Goals:
  - Maintain a platelet count above 100,000/uL
  - Lactate dehydrogenase level within normal limits

## Results 2003 – 2007

- Treatment frequency increased to an average of 3.5 treatments per week
- Maintaining an exchange volume of 10 units per procedure
- Exchange fluid was also changed from fresh frozen plasma (FFP) to cryopoor plasma (CPP)

## Results

### 2008 – May 2009

- Treatments occurred on average 4.25 times per week
- Exchange volume of approximately 12 units

## Results

### June 2009 – April 2010

- Treatment frequency was increased to 5 times per week
- Exchange volume of approximately 12 units per TPE

## Results

### May 2010 – Present

- Treatments daily
- Exchange volume of 12 units per TPE
- Clinical Course
  - Platelet count remains at 100,000 – 120,000/uL
  - Platelet count decreases dramatically to 20,000 – 30,000/uL if one day of treatment is missed

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## Conclusion

- Difficulty of maintaining an adequate supply of AB FFP and AB CPP has posed a continuing challenge

## Conclusion

- Able to maintain the necessary inventory of products on a long-term basis through:
  - Close patient monitoring
  - Multiple changes to the therapeutic apheresis regimen
  - Increased internal collections
  - Intensive searches for imported units

# Conclusion

- Adequate inventory
  - Allowed for an aggressive outpatient treatment regimen
  - Enabling an adequate quality of life
  - ***Outside of the hospital***

# Questions

Thank you!