



The Pipette Line

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PRESIDENT'S MESSAGE:

View from the Desk of Dr. Hassan Aziz



This is my last message as President of ASCLS-GA. It was an honor to serve my profession and my society. I can see how much our society has changed just in the last few years. Change is good, and essential as we can see it happening all around us. There

have been some very good changes taking place. Most notably, we have seen a significant increase in the membership. I believe that every member has some special perspective to add to our society. Every member must feel obligated to add their special perspective to the organization whether it's as involved as being a board member or an officer or hosting a meeting or just informing the public about our profession. These are all positive changes and ones that came with lots of hard work. The future of our organization will be secure into the future only if the members are willing to participate and get involved in the changes.

Your incoming President, Ms. Lisa Anderson, will assume her duties in July. I encourage you to support her sincerely in her endeavors within the society.

In closing, I just want to say thanks to the board and membership who entrusted me with the management of the society and for their confidence and support this past year. From the bottom of my heart, thank you for your trust, and for the honor and the incredible experience of serving as your president.

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The Pipette Line

Editor: *Bonnie Gum*

The Pipette Line is a quarterly Publication of the **American Society for Clinical Laboratory Science-Georgia** for its members.

Note: Copies of complete board minutes and committee reports are available to members on request from Bonnie Gum, ASCLS-GA secretary. Address all correspondence to

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Submitted by

Dr. John W. Ridley, Ph.D., RN, MT(ASCP), COL

Ms. Kathleen A. Moncus was presented the Student of the Year award from West Central Technical College's faculty for the MLT program. Ms. Moncus demonstrated flexibility, diligence and persistence in the program, providing leadership to other members of her class. She exhibited a willing spirit as she was faced with clinical site changes on several occasions, and continued her zealous approach to her work at each of these facilities. Kathleen had the opportunity to choose from among several job offers prior to her completing the program.



Next Board Meeting

Please make plans to attend the ASCLS-GA Board of Directors' meeting May 19, 2006 5:00 PM in Savannah. This meeting is in conjunction with the Region III meeting, which is Lynn Ingram's last one as the director of the Region. The Board will make plans for the Annual Meeting in Chicago. Please invite others and spread the word. We'll meet at Steamers Restaurant located at 1190 King George Blvd, Savannah, GA. You are more than welcome to attend the RIII Meeting that will take place the following day on the AASU Campus..Let me know if you have any questions and I look forward to seeing you in Savannah!

Hassan



Anne Ranne is winning big at casino Night held at the ASCLS-GA annual meeting Social Event.

ASCLS-GA Officers for 2006

The following officers were installed for 2006-2007

President-elect- Jill Dennis

Secretary 2006-2007: Bonnie Gum

District I Director 2006-08: Barbara Russell

District IX Director 2006-08: Virginia Roberts

Nominations Committee: Darcell Thaxton

New Student Forum Officers:

Yvonne Jefferson, President

Tram Nguyen, vice President

Angel Minnifield, the Secretary



**What did you do for
National Laboratory Week.
Plesase send pictures and/or
articles to
Bonnie Gum
gumb@bellsouth.net
or call 706-845-3180**

Student Presented Case Studies

HEMOSTASIS:A JIGSAW PUZZLE

The following are case studies relative to the Hemostasis workshop presented during the ASCLS-GA annual convention. These are student internship case studies from the Medical College of Georgia's Medical Technology Program; listed by each case is the student who developed the case. After each case are several questions to answer. Answers can be found in this issue in another section. This is the first of a two presentations. The next case study will appear in the September 2006 issue of the Pipett Line.

Case study 1 – *Cassandra Richardson, Class of 1999*

Since birth, this three month old infant girl has undergone numerous hematological studies. The mother explained that the infant bruised very easily, described spots on the skin that represented petechiae, and had blood in her stools if she was the least bit constipated. The infant presently was on antibiotics, being treated for a bacterial infection. The following lab results were obtained:

WBC	17.3 x 10 ³ /uL	MCV	81.2 μ ³
RBC	3.80 x 10 ⁶ /uL	MCH	27.2 μμg
HGB	10.3 g/dL	MCHC	33.5 g/dL
HCT	30.9 %	PLT	392.0 x 10 ³ /uL
		RDW	14.4 %

Peripheral blood smear review:

Differential: 33% segs, 3% bands, 59% lymphs, 1% eos and 4% monos.

RBC morphology: Slight anisocytosis and hypochromia

Initial Testing	Results	Reference Range
PT:	11.7 sec	10.7-13.1
INR:	0.9	1.2-4.5
APTT:	32.1 sec	22.4-34.8
Fibrinogen:	434 mg/dl	200-400
BT:	> 15 min	2.5-9.5
Factor VIII assay:	72%	50-150%
vWF assay:	106%	50-150%
Ristocetin Cofactor:	113%	50-166%

Additional Testing	Results	Reference Range
Aggregation studies:		
Arachidonic acid:	<10%	70-90% of Normal
ADP	<10%	70-90% of Normal
Collagen	<10%	70-90% of Normal
Ristocetin	214%	50-150% of Normal

Questions:

1. Based on the patient history and CBC results, what type of anemia is this patient developing?
2. What test would be most useful in diagnosis of this anemia?
3. What is the most probable cause of this developing anemia?
4. In reviewing the initial hemostasis test results, does she have a problem with a coagulation factor deficiency, a platelet problem, a fibrinolytic problem, or a problem with a circulating inhibitor?
5. Based on the history and lab data, what is the cause of this patient's problems?

(continued on page 5)

Case study 1 – Cassandra Richardson, Class of 1999 (continued from page 4)

Questions:

1. Based on the patient history and CBC results, what type of anemia is this patient developing?
This patient may be developing iron deficiency anemia. Normal hemoglobin range for children up to 6 months old is 11.0-14.0 g/dL (Harmening 4th edition). This patient has a hemoglobin valued of 10.3 g/dL. The MCV is on the lower side of normal and the morphology suggests that hypochromia is developing, although the MCHC is in normal range.
2. What test would be most useful in diagnosis of this anemia?
Serum ferritin levels would be the most diagnostic test to assess iron storage levels. If this patient is developing iron deficiency, ferritin levels would be decreased.
3. What is the most probable cause of this developing anemia?
The most probable cause of this anemia is blood loss or hemorrhage. History revealed that this patient had GI bleeding as blood was found in stools.
4. In reviewing the initial hemostasis test results, does she have a problem with a coagulation factor deficiency, a platelet problem, a fibrinolytic problem, or a problem with a circulating inhibitor?
The results of the PT, APTT, Fibrinogen, and Factor VIII assay tests indicate that the patient does not have a factor deficiency nor a circulating inhibitor as these results are normal (except for the slightly increased fibrinogen levels, which may be acting as an acute phase reactant protein).
The patient does not appear to have fibrinolytic activity occurring as no tests detecting this were performed.
However, the patient appears to have a platelet problem since the bleeding time is >15 minutes, even though the platelet count is in the normal range. von Willebrand's disease is ruled out as a possible diagnosis since the results of the vWF (von Willebrand Factor) and Factor VIII assays as well as the Ristocetin cofactor fall in the reference range.

Note the additional testing performed on this patient. Platelet function tests such as platelet aggregation studies are used to identify qualitative platelet disorders such as the more commonly known von Willebrand's Disease. Aggregation studies showed that very little to no platelet aggregating response occurred when tested using routine aggregating reagents (ADP, arachidonic acid, collagen). Normally each of these aggregating reagents would attach onto the platelets, stimulate them to release their granules which in-turn further stimulate other platelets. In the test tube vortex created during testing, platelets collide and normally stick to each other when appropriate receptors and compounds are present. In this case, platelets did not respond by aggregating when reagents were added, except when ristocetin was added.

5. Based on the history and lab data, what is the cause of this patient's problems?
These aggregation studies suggest the patient has Glanzmann's Thrombasthenia, a very rare platelet function disorder. In Glanzmann's, platelets lack the glycoprotein IIb/IIIa receptors necessary for the binding of various substances to platelets. Normally the binding of fibrinogen with calcium to this receptor between two platelets causes platelets to stick together or aggregate when platelets collide. In this disorder, platelets are stimulated but cannot stick together due to lack of receptors. Thus, no aggregation occurs with the commonly used reagents, except ristocetin. The reason that ristocetin causes platelet aggregation is that it will bind to vWF and not to the platelet membrane and allows aggregation to occur by a different mechanism.
Patients with Glanzmann's thrombasthenia can present clinically with minor bruising to more severe, potentially fatal hemorrhages. Gastrointestinal hemorrhaging, as displayed by this patient, are less commonly seen; common manifestations include easy bruising, epistaxis, and prolonged bleeding from minor cuts.

Honorees Announce at the Annual Meeting

CLINICAL LABORATORY SCIENTIST OF THE YEAR

Lester Pretlow

Award: engraved Silver bowl and
a certificate suitable for framing.
Nomination by ASCLS-GA members

GLORIA F. GILBERT AWARD

Cathy Weaver

Award: plaque or plate and a certificate
suitable for framing. Nominations by
ASCLS-GA members and others

CONTRIBUTION TO THE PROFESSION AWARD

**Lisa Anderson Bonnie Gum
Barbara Russell
Darcel Thaxton**

Award: professionally framed certificate
presented at the ASCLS-GA Annual
Meeting.
Up to one award in each of the following
areas may be given: Generalist, Hematology,
Chemistry, Immunohematology,
Microbiology

KEYS TO THE FUTURE

**Michelle Butina Mary Nelson
Jennifer LeFebvre**

Nominations are by ASCLS-GA members and
others. Award: recognition at the ASCLS-GA
annual meeting with a certificate

OMICRON Sigma

**Jill Dennis Mi Hui Scales
Ron Macy Barbara Kraj
Joeline Davidson
Cindy Parrish**

Award: recognition at the ASCLS-GA
Annual meeting with a special ribbon.
Nominations are made by ASCLS-GA
members and others.

The ASCLS-GA Annual meeting hosted a Social Event for "big spenders."

Casino Night was a enjoyable success. Attendees enjoyed spending their fake chips on the roulette wheel, Black jack and other games of chance. At the end of the night participants turned in their chips in exchange for tickets placed in a drawing for many special prizes.



Cathy Minish prepares to roll the dice



Hassan and Jenny enjoy a great meal before the games begin.

May 19, 2006

ASCLS-GA Board of Directors, Savannah, GA

May 20, 2006

Region III, Savannah, GA

July 25-29, 2006

ASCLS Annual Meeting, Chicago, IL

July 17-21, 2007

ASCLS Annual Meeting, San Diego, CA

February 22-24, 2007

Clinical Laboratory Educators Conference, Louisville, KY



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ASCLS-GA

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