

**Appendix 1 (as supplied by the authors): Patient safety learning summary**

## Patient Safety Learning Summary

**Introduction:** *This document contains information obtained from the review of a patient safety issue. The purpose of this document is to share learning and to make patient care safer. In support of a just culture the patient, families, staff and medical staff were proactively informed about the production of this document (except in the case of an aggregate review). Identifying details have been removed. This document may be shared with AHS staff and medical staff who may benefit from lessons learned, and patients and families who helped us improve the quality of our healthcare services.*

**Date document created:** October 2, 2018

**Title:** Thrombotic Thrombocytopenia Purpura

### Scenario:

A patient with no significant past medical history presented to an Urgent Care facility complaining of a sudden onset of slurred speech, tingling to right side of body and face and weakness x 10 minutes. Symptoms resolved shortly after arrival with a complaint of residual fogginess that remained. The patient also stated that they had a severe headache earlier in the day.

On examination the patient was alert and oriented and had no significant findings other than a right positive Babinski reflex, and an elevated blood pressure. A physician with the Stroke team was consulted via RAAPID and a decision was made to perform a CT/CTA of the head. Results of the CT/CTA were negative for any significant findings. Blood work was also drawn indicating anemia and thrombocytopenia. A peripheral blood smear reported the next morning found no evidence of red blood cell shape changes and no signs of red blood cell destruction. The decision was made for further follow-up at the TIA Rapid Assessment clinic approximately 36 hours later, and the patient was discharged home.

Two days after discharge from the Urgent Care facility, the patient presented to an urban acute tertiary care facility ER with symptoms similar to the Urgent Care presentation. Upon examination there was evidence of scleral jaundice and mild bruising to the lower extremities. Further laboratory investigations demonstrated evidence of red blood cell destruction and a blood smear indicated red blood cell shape changes. The patient was admitted to hospital with a diagnosis of Thrombotic Thrombocytopenic Purpura (TTP) and was started on plasmapheresis and prednisone.

The patient responded initially to the course of treatment, with an improvement in clinical presentation, however after several days of treatment the patient demonstrated a return of anemia, thrombocytopenia and red blood cell destruction. The patient passed away due to a cardiac arrest approximately a week and half after admission.

### What additional information is relevant?

- Patients presenting to an Urgent Care or Emergency Department with a stroke-like presentation requiring an urgent consultation with the stroke team, do not leave with written confirmation of appointment or written discharge teaching upon discharge.
- Practice variation exists in the management of TTP. Currently, there are no protocols for the investigation and treatment of patients diagnosed with this condition.
- TTP is a relatively rare diagnosis and can be difficult to diagnose.
- There are no written materials available through Alberta Health Services to provide to patients and families regarding the diagnosis, prognosis and treatment of TTP.

### Learning:

#### Short Term (within 3 months)

- Develop a patient handout and specific work processes for use by the Stroke Program and Urgent Care/Emergency Department physicians to ensure closed loop communication regarding next steps for patients requiring urgent stroke follow up. The patient should leave Urgent Care/Emergency Department with written information including but not limited to date, time and location of clinic appointment, symptoms to watch for, prescribed medication and when, how and where to access medical care if required prior to clinic appointment.
- Provide a consistent source of up to date, reliable and valid information and education for patients and families on the subject of TTP (Thrombotic Thrombocytopenic Purpura), with the provision of vetted on-line resources.

#### Medium Term (within 3-12 months)

- Develop a guideline for the diagnosis, assessment and treatment of TTP (Thrombotic Thrombocytopenic Purpura). This should include but not limited to initial investigation, acute emergency management, line selection, immunosuppressant therapy, monitoring and management of relapse.
- Implement an educational initiative for departments involved in the management of TTP (Thrombotic Thrombocytopenic Purpura) patients, through the use of such forums as Grand Rounds, departmental and/or divisional rounds.

#### Long Term (greater than 12 months)

- Identify Subject Matter Experts to engage with Connect Care to create an Order Set within EPIC to facilitate the management of TTP (Thrombotic Thrombocytopenic Purpura.)