

Precision Sedation: Reducing general anaesthesia for lumbar punctures in patients with leukemia and lymphoma

SickKids®

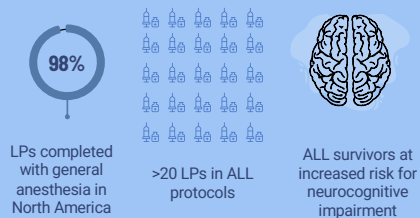
Karen Arane¹, Daphne Li², Tara Baxter¹, Bina Gandhi¹, Karyn Positano¹, Melissa Howlett¹, Devon Williams¹, Kishon Manoharan¹, Tobias Everett², Sarah Alexander¹

¹Division of Haematology/Oncology, The Hospital for Sick Children, Toronto, Canada ²Division of Anesthesia, The Hospital for Sick Children, Toronto, Canada



BACKGROUND

LPs in Acute Lymphoblastic Leukemia (ALL)



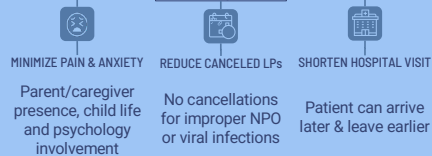
- Children and adolescents with leukemia require multiple lumbar punctures (LPs) for the delivery of intrathecal chemotherapy.
- In North America, this procedure is most commonly done under general anaesthesia (GA), typically using propofol.
- There is a growing body of evidence that cumulative exposure to propofol is associated with risks of neurocognitive impairment.

OBJECTIVES

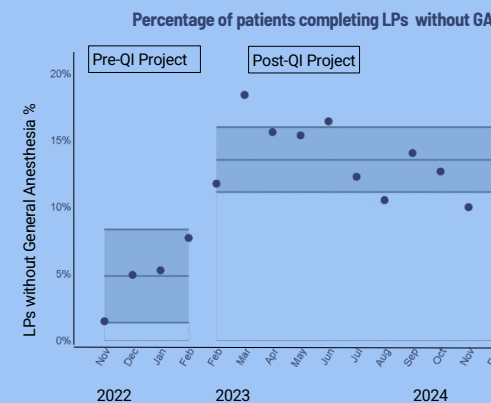
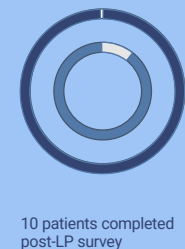
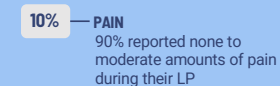
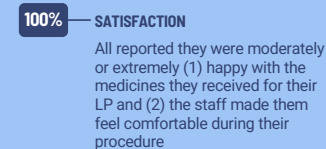
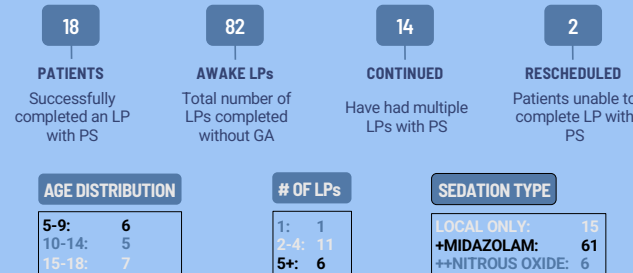
Primary Goal:

TAILOR THE AMOUNT OF SEDATION TO EACH PATIENT & LIMIT EXPOSURE TO GA

Secondary Goals:



RESULTS



SURVEY RESULTS

WHAT WAS MOST HELPFUL?

- the staff comforting me and letting me know what was happening
- having Mom and watching iPad
- being able to eat beforehand, staff very friendly/encouraging
- nurse stroking my hair, playing music, mom in the room
- when my dad got to stay with me

ADDITIONAL COMMENTS

- Mom: very happy that my child's LP has been done with less medication while she was awake
- be more gentle when looking for the spot, medication to work more
- Age appropriate toys

METHODS

PATIENT SELECTION

A ELIGIBLE PATIENTS:

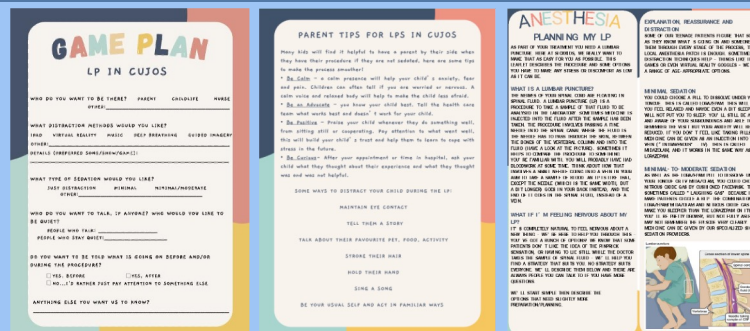
5-18 yo with ALL, lymphoblastic lymphoma, mature B non-Hodgkin lymphoma, Burkitt leukemia

B EXCLUSION CRITERIA:

Patients in induction or scheduled for concomitant bone marrow aspirate/biopsy

C PARTICIPATING PATIENTS:

Scheduled for their next IT chemotherapy with local anesthesia or anxiolytic instead of GA



CONCLUSION

With this QI project of PS we have established a practice that allowed a subset of patients to safely, and without excess distress or discomfort, undergo sequential LPs with minimal or no sedation. Additional observed benefits included decreasing length of time in the hospital on procedure days and relief from the requirement to be fasting.



- Ensure all new patients are approached at diagnosis
- Document in chart discussion completed regarding PS



- Many Neuro-Onc patients also require LPs as part of their treatment/diagnosis
- Consider expanding to non-oncology patients



- Reach out to patients & families who have successfully completed PS to discuss what is working/areas for improvement

This project was supported by the Garron Family Cancer Centre