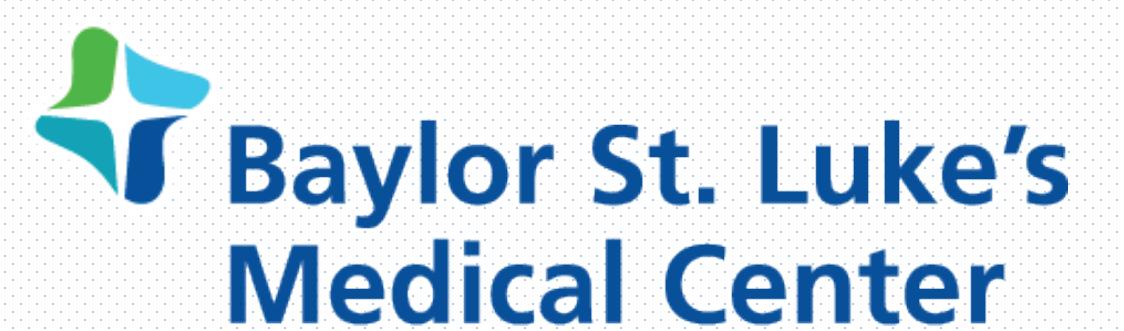


Characteristics of Patients with Deep Venous Thrombosis after Intracerebral Hemorrhage

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Deep venous thrombosis is a common cause of morbidity and mortality in patients after acute stroke, including ICH. The aim of this work is to assess the prevalence of DVT in patients diagnosed with ICH and study its baseline demographic characteristics as well as in-hospital clinical course.

Background

- Deep venous thrombosis (DVT) is a common cause of morbidity and mortality in patients admitted to the neurointensive care unit.
- Asymptomatic DVT and clinically evident DVT vary in their reported prevalence in literature.
- Exploring rates and diagnostic parameters of DVT in the NCCU might aid in the early diagnosis, prophylaxis and management strategies implemented.

Inclusion Criteria
Age > 18
ICH diagnosed by imaging admitted to NCCU
Complete medical record for entire hospital course

Exclusion Criteria
Incomplete documentation on EMR
No adequate imaging or laboratory data available for evaluation

Figure 1. Inclusion and exclusion criteria.



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Objectives

- To identify rates and prevalence of DVT during hospitalization after ICH.
- To explore the baseline demographic characteristics of patients presenting with DVT during hospital stay.
- To assess the impact of DVT in hospital stay and clinical outcome at discharge.

Methods

- Retrospective review of consecutive patients with ICH admitted to the Baylor-St. Luke's Medical Center Neuroscience Critical Care Unit (NCCU) (January 2008 – December 2012) (Figure 1).
- Demographics, prevalence of DVT, admission status, hospital length of stay (HLOS), intensive care unit length of stay (ICU-LOS) and clinical outcome at discharge (Glasgow outcome Scale: GOS) were collected.
- All the data was described using descriptive statistics.

Table 1. Demographics for patients presenting with DVT after ICH.

DVT after ICH (n = 53)	n	%
Female	22	41.1
Age ^a		59.5 ± 1.3
Good Outcome	21	40.4
Poor Outcome	31	59.6
HLOS ^b		20 [16.7]
ICU-LOS ^b		6 [13.7]

Length of Stay Comparison	No DVT	DVT	p-value
HLOS ^a	10.1 ± 14.3	26.5 ± 28.9	< 0.001
ICU-LOS ^a	5.5 ± 6.9	15.3 ± 17.1	< 0.001

^a Mean ± SD; ^b Days [IQR]

Figure 2. Ethnic distribution of patients with DVT after ICH in our sample.

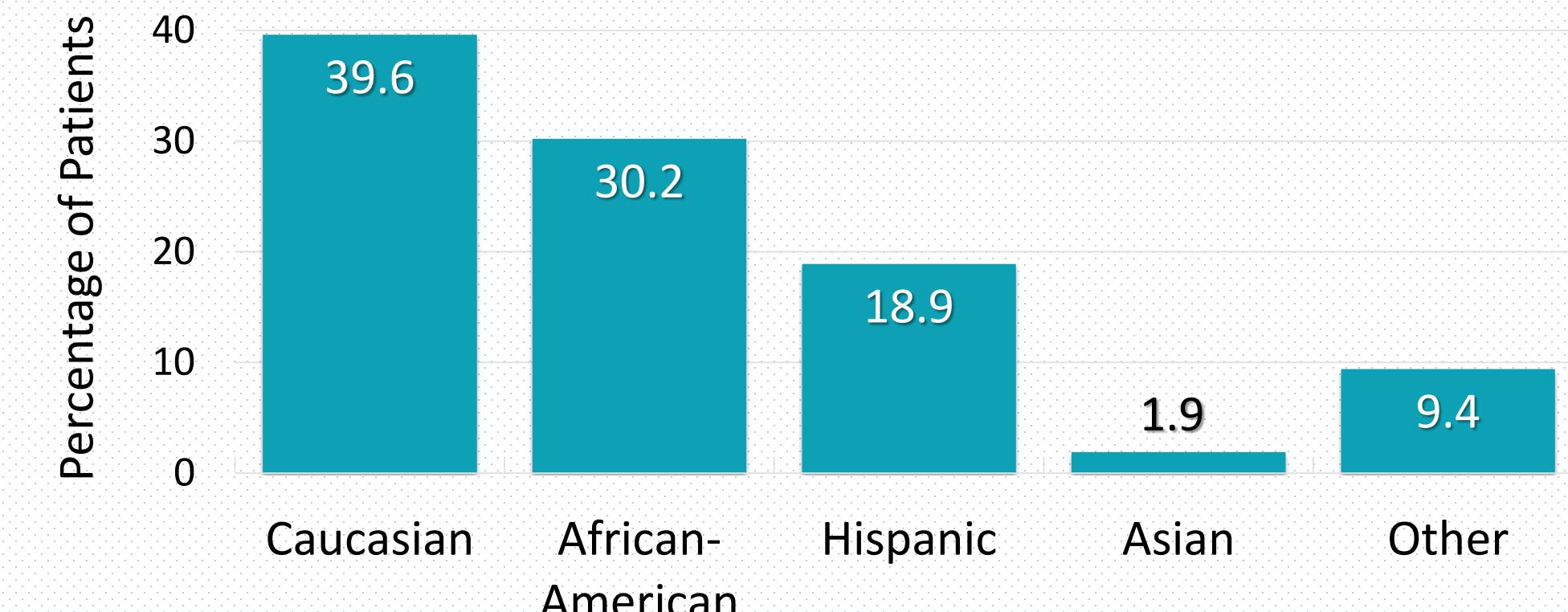
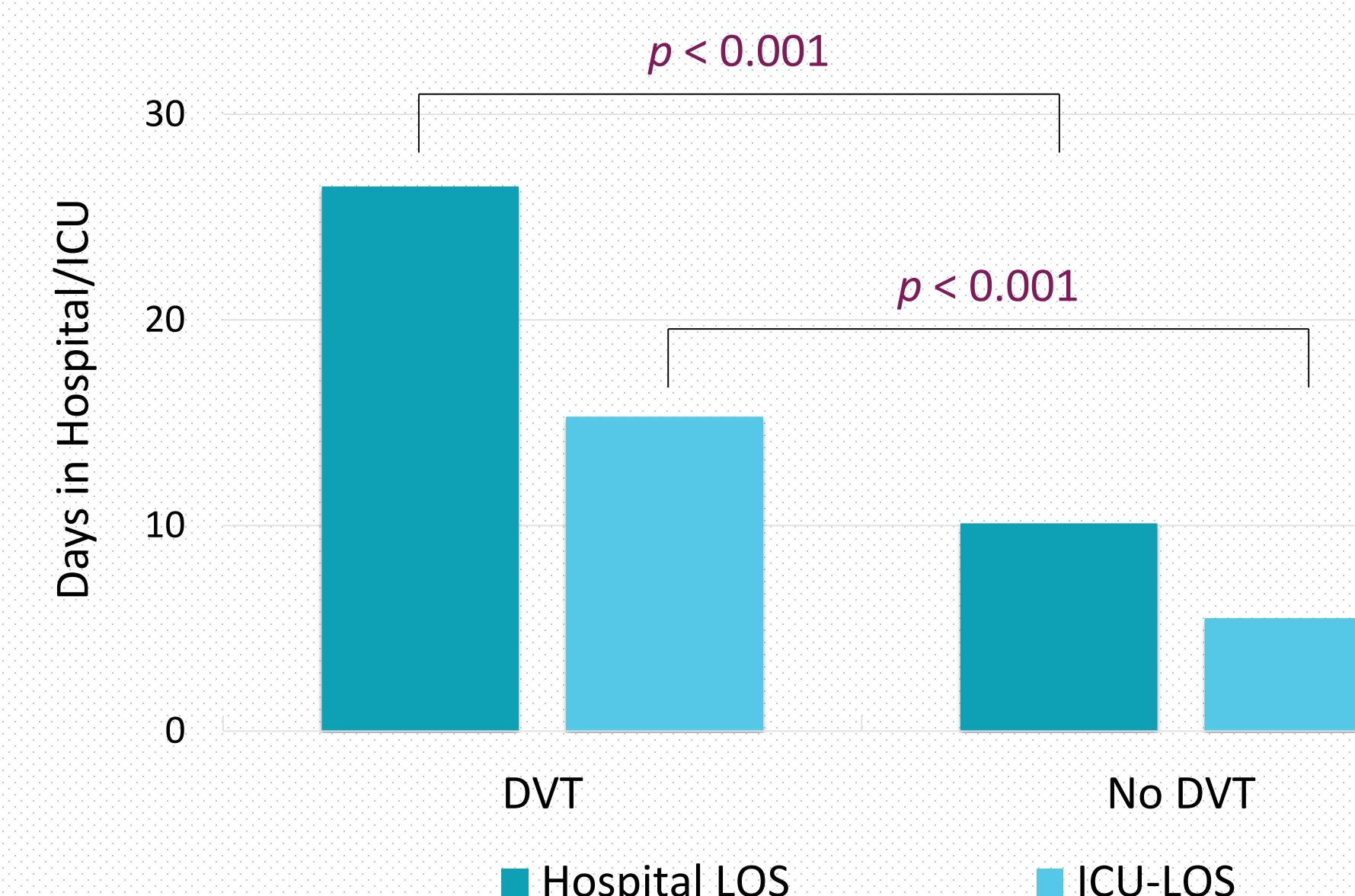


Figure 3. HLOS and ICU-LOS in patients with DVT after ICH.



ICH patients admitted to the NICU are at an increased risk of DVT during their hospital stay.

Results

- 604 patients with ICH were included (55.7% female).
- DVT was identified in 53 subjects (8.8%).
- Mean age of patients with DVT was 59.5 ± 1.3 and 22 subjects (41.1%) were female (Table 1).
- Median time from diagnosis to DVT was 120 hours (IQR 192) after the initial symptoms of ICH (Figure 2).
- Median HLOS for patients with DVT was 20 days (IQR 16.7) and ICU-LOS was 6 days (IQR 13.7).
- ICU-LOS was significantly longer for patients with DVT compared to patients without DVT, 15.3 ± 17.1 and 5.5 ± 6.9 , respectively ($p < 0.001$).
- Hospital LOS was significantly longer for patients with DVT compared to patients without DVT, 26.5 ± 28.9 and 10.1 ± 14.3 , respectively ($p < 0.001$).
- 59.6% of patients who presented with DVT had a poor clinical outcome at hospital discharge (GOS < 4).

Conclusions

- ICH patients admitted to the NICU are at an increased risk of DVT during their hospital stay.
- Understanding the baseline characteristics and clinical course of patients at risk of DVT can be useful for the application of surveillance and early identification.
- Further large prospective studies approaching patients at risk of DVT might be needed.

Understanding characteristics of patients at risk of DVT can help to determine adequate surveillance and prophylaxis.