

One institutions' experience with implantation of long-term central venous devices placements in patients with mediastinal lymphadenopathy

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Background

Mediastinal lymphadenopathy in aggressive lymphomas poses challenges in implanting long-term central venous access devices (LCVADs), largely due to central vein compression, increased thrombosis risk, and superior vena cava syndrome (SVC). Intensive anticancer therapy requires a high-quality long-term central venous catheter, which allows the patient adequate therapy from the beginning.

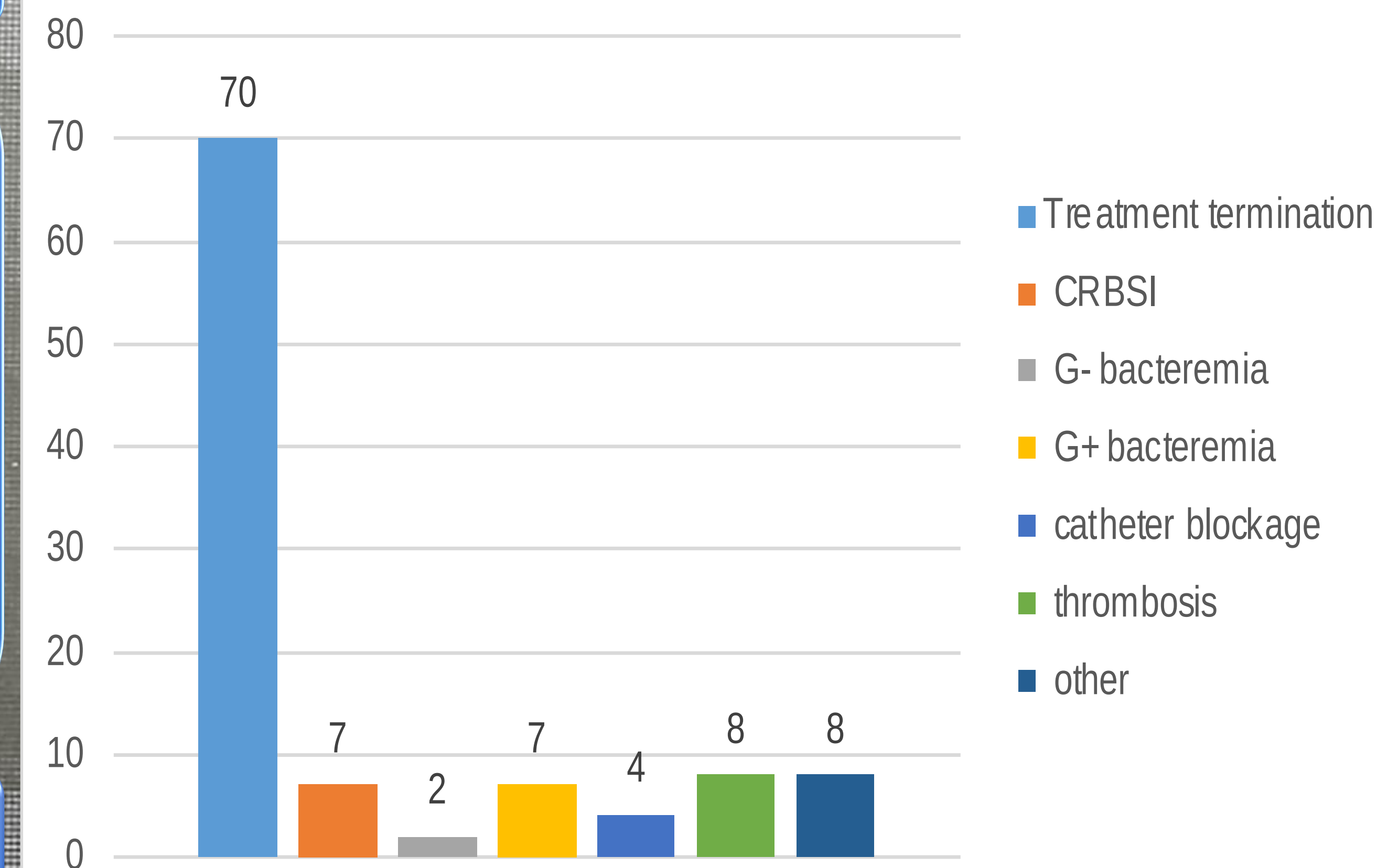
AIMS

The study focused on LCVADs-related complications and the feasibility of LCVADs in patients with substantial mediastinal masses without prior cytoreduction.

Methods

A retrospective analysis was conducted on lymphoma patients with LCVADs. This included also patients with SVC and significant mediastinal masses, tracking from LCVADs insertion to removal or follow-up end. Since April 2019, when we started implanting long-term vascular accesses, until the end of 2023 we implanted a total of 1530 accesses at the National Oncology Institute in Bratislava of which 104 patients had a mediastinal mass.

Reasons for unplanned catheter removal



Results

Between 4/2019 – 6/2023 104 patients with mediastinal lymphadenopathy, predominantly lymphomas, received LCVADs.

Types included 64 PICCs, 17 PORTs, 9 FICCs, and 14 CICC, which were chosen after consultation of radiologist, who took measures of venous system.

17 patients had SVC, and 79 received CVCs without prior cytoreduction.

The median catheter duration was 124 days.

Most patients (N=79) needed one catheter during whole treatment, which included regimens like stem cell transplantation or CAR-T cell therapy (N=32).

Catheter removal reasons were therapy completion (N=70), infection (N=6), thrombosis (N=3), malfunction (N=4), and others (N=8).

There were 8 thromboses and 7 catheter-related bloodstream infections.

When upper body cannulation was unfeasible, the femoral route was used (FICCS, N=9).

Most common sites of implantation were the brachial vein (N=66), jugular vein (N=27), femoral vein (N=in 9) and subclavian vein (N=2).

Conclusion

LCVDs are beneficial for patients with mediastinal lymphomas from therapy start, even without cytoreduction. Proper management and assessment of venous system before cannulation ensures durability from initial phases to post-allogeneic bone marrow transplantation care.

Type of CVC

