Peer Review File
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Reviewer Comments

Reviewer A

Comment 1: Include a representative case/series of cases briefly where patient was eventually cannulated and ECMO established after preinduction guidwire placement
Reply 1: Amongst our cases in which ECMO has been utilized for this purpose, we have been fortunate not to require an emergent conversion to ECMO, reflecting perhaps a low threshold on our part to cannulate. We did make the decision to include a separate case in which V-V ECMO was established prior to induction

Reviewer B

Comment 2: Regarding bibliographical search, could the authors include a table summarizing the experience of the authors referenced
Reply 2: We evaluated at length the potential inclusion of such a table, but found that the significant heterogeneity of case reports, utilization of techniques and indications for use of extracorporeal support made it difficult to provide useful information in such a format.

Comment 3: Add more practical information regarding concrete haemodynamic and respiratory parameters indicating the need of ECMO
Reply 3: We have added a section on page 13 regarding indicators for the need of ECMO once support is available.

Comment 4: May the authors describe more in-depth the different approaches (peripheral and central) and indications of every ECMO configuration
Reply 4: We have expanded upon ECMO configurations on page 10. We also add a brief comment on central cannulation.

Comment 5: Case included not useful. Would be interesting to know the case-series of the authors' experience
Reply 5: We have added an additional case to describe initiation of ECMO for management of a mediastinal mass. We have elected to keep the previous case of ECMO cannulation without initiation of support as it demonstrates a valuable point. Full preparation to initiate support even if ECMO is not ultimately utilized should be considered a success of the multidisciplinary team.

Comment 6: It would be useful the addition of some algorithm depicting the decision-making process regarding the indications and types of ECMO configurations for each particular clinical setting
Reply 6: On page 10 we offer an additional narrative description of our decision making regarding ECMO cannulation.

Comment 7: I do not find the figures useful. Do the authors suggest the indication of ECMO for figures 2 and 3
Reply 6: With this comment in mind. The original figure 1 has been removed. Figure 1 now indicates a mass for which we deem high risk for requirement for ECMO. Figure 2 now demonstrates intermediate risk. Figure 3 is a new figure included to match an additional clinical case described on page 13. We hope that this will provide figures of improved relevance for this paper.

Reviewer C

Comment 8: I do not agree that V-A ECMO is the main approach in this setting
Reply 8: V-V certainly plays a role in scenario of pure tracheal compression, we have amended the paper to reflect the role of V-V ECMO and considerations to determine instances where V-A or V-V may be preferential.

Comment 9: Suggest correcting V-V and V-A throughout the manuscript to be consistent with recommended ELSO nomenclature
Reply 9: To better fit with the ELSO configuration nomenclature, the hyphenated terms have now been substituted throughout the paper.

Comment 10: Add ECLS as keyword
Reply 10: We have added ECLS as a keyword to aid in search indexing. We also explored the use of ECLS for our literature search. As our search was based off of MeSH terms, 'extracorporeal circulation' would encompass both ECMO and ECLS. As such, no further articles were identified by adding ECLS as a search term.

Comment 11: no statistic how relevant problem is/how often patients require surgery, some may require chemotherapy. If the topic is only focused on surgical patients it should be stated in the title
Reply 11: We have changed the title to better reflect that our focus lies upon ECMO support in the surgical management of mediastinal masses. It is indeed an interesting question regarding the true prevalence of ECMO requirement in the setting of mediastinal masses. As reports have largely relied upon case reports or small series due to the thankfully rare occurrence of such large masses, we have been unable to identify an accurate number to quote. It may be of interest in a future study to evaluate a national payor database to determine the proportion of mediastinal mass resections and concomitant ECMO support

Comment 12: Further, some of those patients underwent surgery, previously on CPB, so why the cardiac support via ECMO/ECLS is beneficial for those patients, and who might benefit from respiratory support on V-V ECMO and which configuration, because jugular -femoral notfeasible.
Reply 12: With regards to the second portion of this comment, we have added an additional section on V-V ECMO above including use of femoral-femoral V-V ECMO and concern for recirculation.

Comment 13: Further, cannulation timing,when the patients deteriorate, cannulation pre- or intraoperatively, how long on extracorporeal circulation, extubation on ECMO or extubation after cannulation.
Reply 13: Our focus for this article is the elective use of ECMO to allow for surgical resection. We add in detail on page 13 timing of when to wean support and decannulate, all planned during the index operation.

Comment 14: How to manage anticoagulation
Reply 14: We have added a section on anticoagulation on page 12