

## Peer Review File

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### Reviewer Comments:

Comment 1: Reviewer B brought up the recent 2023 ESH guidelines for the management of arterial hypertension and asked we consider including this among the references, as well as discuss it in the text. Particularly commenting on hypertensive emergency and urgency.

Reply 1: We reviewed these new ESH guidelines and included them as a reference, as well as in the text as detailed below.

Changes in the text:

Lines 152-155 we reference the 2023 ESH guidelines pointing out their new diagnostic and management recommendations for hypertensive emergency.

Lines 218-224 we added the reference for the 2023 ESH and commentary on outpatient management strategies for aortic dissection.

Lines 269-270 we reference the 2023 ESH guidelines when discussing intravenous diuretics in acute hypertensive cardiogenic pulmonary edema.

Lines 316-319 we added the 2023 ESH guidelines on the outpatient management of aortic aneurysm.

Comment 2: Reviewer B pointed out that we did not comment on diuretics as a management strategy for hypertensive cardiogenic pulmonary edema.

Reply 2: We have added a paragraph on intravenous diuretics for the management of this condition as detailed below.

Changes in text:

Lines 266-270 we discuss the evidence, recommendations, and practical role of diuretics as a treatment for this condition.

Comment 3: Reviewer C requested that in the introduction we comment on the knowledge as compared to the guidelines for the management of hypertensive emergency.

Reply 3: This was similar to Reviewer B Comment 1's request to include the ESH 2023 guidelines on hypertensive emergency. We did add this to the introduction. We did a literature review on hypertensive emergency and given the incredible number of studies, as well as different large societal guidelines and recommendations, we felt like expanding on hypertensive emergency beyond this would distract from the main 4 topics of the review and was slightly outside the scope of the manuscript.

Changes in text:

Lines 152-155 we reference the 2023 ESH guidelines pointing out their new diagnostic and management recommendations for hypertensive emergency.

Comment 4: Reviewer C pointed out that it may be useful to include a paragraph on the long-term management of blood pressure in patients with hypertensive aortic emergencies.

Reply 4: We have added this as two separate paragraphs, one for acute aortic dissection and one for acute aortic aneurysm.

Changes in text:

Lines 218-223 discuss the recommendations on long term blood pressure and heart rate management for acute aortic dissection.

Lines 314-319 discuss the recommendations on long term blood pressure and heart rate management for acute aortic aneurysm.