**Methods**

Supine anterior-posterior chest X-ray of patients with an aortic valve prosthesis (n=473) were analyzed to determine the location of the aortic valve. Several ratios with a possible relation to the aortic valve location were analyzed. The Aortic Valve Location (AVL) ratio, defined as the distance between the carina and the aortic valve, divided by the thoracic width, was found to be the best performing ratio. The AVL ratio was validated using computed tomography images of patients with angina pectoris without known valvular disease (n=95).

**Results**

The AVL ratio determines the location of the aortic valve caudal to the carina, at a distance of the thoracic width times 0.25±0.05 for male patients and times 0.28±0.05 for female patients. There was a good correlation between cardiac device position (Impella) assessed with the AVL ratio and with echocardiography (n=53), fig 3.

**Conclusions**

The Aortic Valve Location Ratio enables accurate localization of the aortic valve on supine chest X-ray. This tool is easily applicable and can be used for assessment of cardiac device position in patients on the ICU.

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