



The placement of a laryngeal mask airway (LMA) changes the relative positions of the common carotid artery (CCA) and right internal jugular vein (IJV), thereby affecting venipuncture via the right IJV” Liu et al (2015).

Abstract:

The placement of a laryngeal mask airway (LMA) changes the relative positions of the common carotid artery (CCA) and right internal jugular vein (IJV), thereby affecting venipuncture via the right IJV. Therefore, we went on to determine the optimal site for puncturing the IJV after LMA-Supreme™ placement

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In this study, forty-six patients were placed with a LMA-Supreme™ (size 3 or 4), and the right IJV was punctured at either of the three points (anterior, middle or posterior point). The CCA diameters and overlap between the right IJV and CCA were recorded before and after the LMA-Supreme™ placement. Finally, the success rates of IJV puncturing at the three aforementioned points were compared. We found that the size of the LMA-Supreme™ had no effect on patient respiration during the procedure. Overlap between the right IJV and CCA at the anterior and middle points was significantly increased after size 3 LMA-Supreme™ placements; Size 4 masks decreased the CCA diameters at the middle and posterior points, and significantly increased overlap between the right IJV and CCA at all the three points; IJV

punctures performed after placement of size 3 LMA-Supreme™ had higher success rate than those performed after placement of size 4 masks, and were less likely to result in accidental arterial puncture. In conclusion, our study demonstrated that placement of size 3 LMA-Supreme™ caused little change in overlapping between the right IJV and CCA and the incidence of accidental arterial puncture; particularly for punctures performed at the posterior point. Therefore, we recommend venipuncture at the posterior point after placement of a LMA-Supreme™.

Reference:

Liu, H.Q., Li, X.B., Zhang, Y.S. and Li, J. (2015) Effect of laryngeal mask airway placement on the optimal site and success rate of venipuncture via the right internal jugular vein. International Journal of Clinical and Experimental Medicine. 8(8), p.13179-86. eCollection 2015.

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