Incidental azygos vein cannulation has been reported in a few cases of neonatal extracorporeal membrane oxygenation (ECMO) Mayer et al (2019).

Abstract:

Incidental azygos vein cannulation has been reported in a few cases of neonatal extracorporeal membrane oxygenation (ECMO). This complication is described in the literature mainly in pathological conditions wherein increased central venous pressure dilates the superior vena cava (SVC), i.e., right congenital diaphragmatic hernia (CDH) or pulmonary hypertension. Azygos vein cannulation should always be suspected in cases of impaired venous return and circuit failure. Although rare, it hinders proper venous aspiration of the ECMO circuit and generally requires repositioning or replacement of the venous cannula or conversion to central cannulation. In this report, we describe a newborn with severe right CDH who required ECMO assistance, wherein incidental cannulation of the azygos vein resulted in successful functioning of the circuit because of the concomitant presence of isolated interruption of the inferior vena cava and azygos continuation. To the best of our knowledge, this is the first report of successful neonatal ECMO despite azygos vein cannulation in a patient with such rare physiology.

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