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A bovine aortic arch in humans



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ABSTRACT

We describe a curious congenital variation of human aortic arch (AA) branching pattern termed the “bovine aortic arch”. Rather than arising directly from the AA as a separate branch as occurs in the most common AA branching pattern, the left common carotid artery moves to the right and merges from the brachiocephalic trunk. It is the normal AA branching pattern presented in a number of animals (canines, felines or Macaque monkeys) but it has nothing to do with anatomy of AA in ruminant animals, including cattle and buffalo. That is why it is one of the most widely misnomers used in medical literature whose origin is nowadays unknown.

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One congenital variation of human aortic arch (AA) branching pattern in which the left common carotid artery (LCCA) originates from the brachiocephalic trunk (BT) is termed the “bovine aortic arch”. Rather than arising directly from the AA as a separate branch as occurs in the most common AA branching pattern, and as happens with the left subclavian artery (LSA), the LCCA origin moves to the right and merges from the BT (Fig. 1A–E). Although it is the third most-common normal variant found in 9% humans, the origin of this term remains unclear. It is the normal AA branching pattern

presented in a number of animals (canines, felines or Macaque monkeys) but it has nothing to do with anatomy of AA in ruminant animals, including cattle and buffalo. That is why it is one of the most widely used misnomer in medical literature whose origin is nowadays unknown.

Conflicts of interest

All authors have none to declare.

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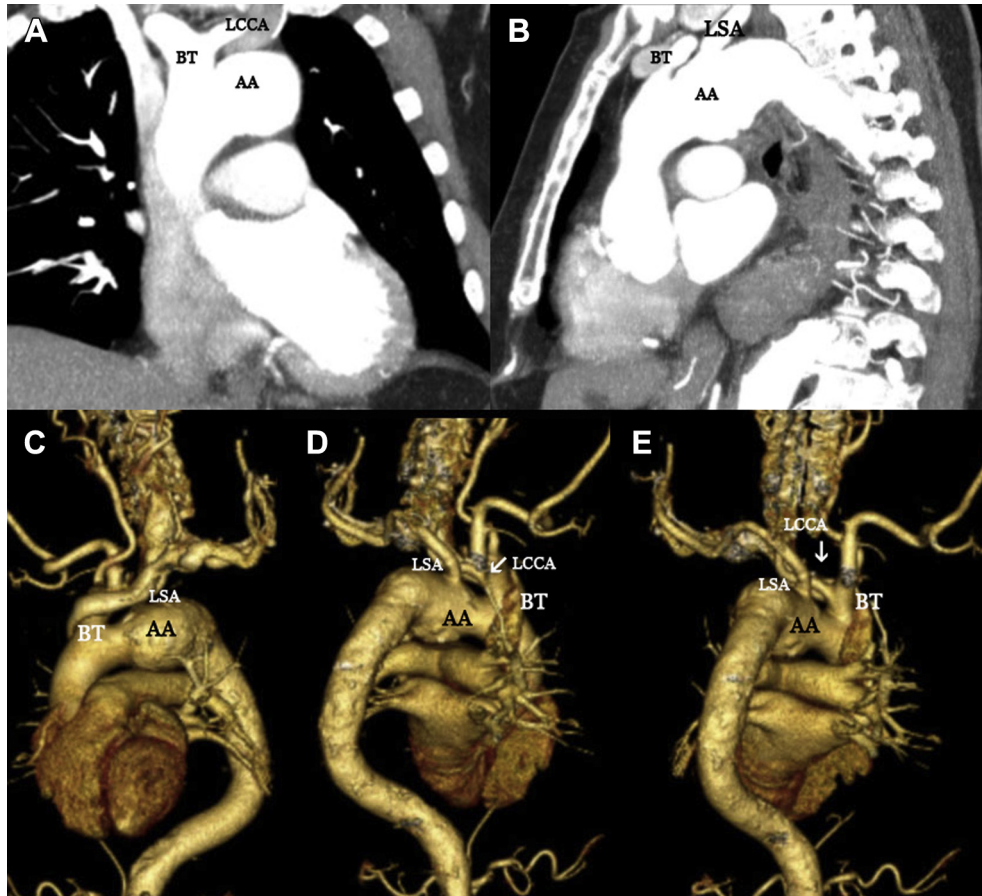


Fig. 1 – A–B: Computed tomography scan images showing bovine aortic arch branching pattern. Left common carotid artery originates from brachiocephalic trunk (black arrow). **C–E:** Three-dimensional computerized tomography reconstruction images. AA: aortic arch. LCCA: left common carotid artery. BT: brachiocephalic trunk. LSA: left subclavian artery.