

ORIGINAL RESEARCH ARTICLE

CADAVERIC STUDY ON ARTERIAL PATTERNS OF VERMIFORM APPENDIX

Sanjay Kumar Sinha¹, Vishal Parmar², Jay Prakash Bharti³

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ABSTRACT: Appendicectomy is a common surgical procedure worldwide and it refers to the surgical removal of the vermiform appendix for therapeutic reasons. This surgical procedure when performed classically or laparoscopically requires thorough knowledge of surface, gross and vascular anatomy of the vestigial organ. Deficiency in knowledge of variations in blood supply of the appendix can prove to be a problem for the operating surgeon.

KEYWORDS: Vermiform appendix, Appendicectomy, Vestigial organ.

INTRODUCTION: The appendicular artery is normally a branch of the inferior division of the ileocolic artery, which runs behind the ileum to enter the mesoappendix.^[1] In its course it gives off a recurrent branch which anastomoses with a branch of the posterior caecal artery. The artery enters the mesoappendix a short distance from the appendicular base.^[2] The appendicular artery traverses the free margin of the mesoappendix and tends to approach the tip of the organ. As the mesoappendix does not continue upto the tip of the appendix, the artery now lies in direct contact with the appendicular tip. It must be remembered that the appendicular artery is an end artery.^[3] Accessory arteries are common and many individuals possess two or more arteries of supply to the appendix. Accessory appendicular artery which is usually a branch of posterior caecal artery supplies the appendicular base. Damage to this artery can lead to significant intra-operative and postoperative hemorrhage and should be searched for carefully and ligated once the main appendicular artery is controlled.^[4]

MATERIALS AND METHODS: During routine cadaveric dissections performed in the Department of Anatomy, Katihar Medical College, Katihar, fifty specimens of composite viscera of caecum, appendix, last two inches of ileum and first two inches of ascending colon were dissected and removed with intact blood vessels. The specimens were washed under running tap water and were fixed in 10% formalin. The ileocolic artery along with its branches to the appendix was traced and variations in arterial patterns of the appendix were recorded.

OBSERVATIONS: Observations are presented in tabular form.

Group	Feature	No.	Percentage
A	Single AA branching from inferior division of ileocolic artery	28/50	56%
B	Single AA branching directly from ileocolic artery	12/50	24%
C	Accessory AA present	10/50	20%

Table 1

AA = Appendicular Artery

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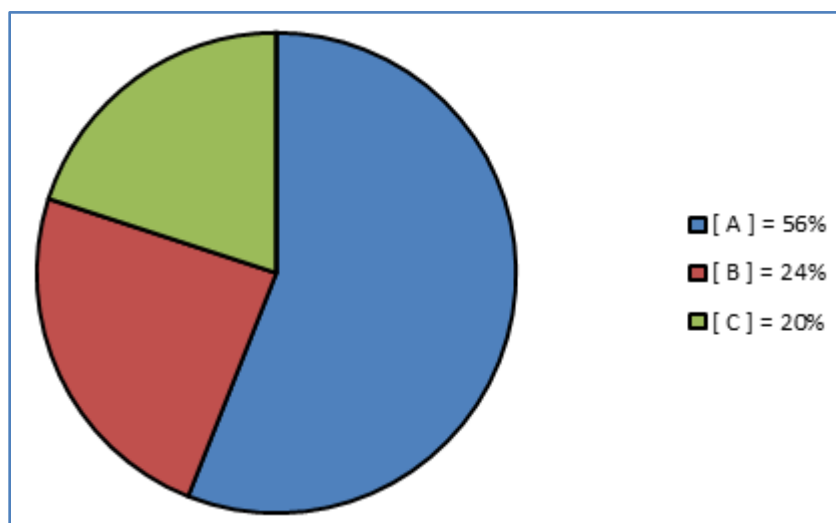


Fig. 1: Pie chart depicting the findings in percentage

DISCUSSION: Out of the 50 specimens observed, 28 specimens (56%) revealed the presence of a single appendicular artery which branched from the inferior division of ileocolic artery. This is a normal finding and has been documented previously by Cunningham^[5] and Standring.^[2] In 12 specimens (24%) a single appendicular artery which branched directly from the ileocolic artery was observed. This type of origin has also been described by Haller.^[6] 10 specimens (20%) showed the presence of accessory appendicular arteries. Accessory appendicular arteries have been previously mentioned by Anson^[7] and Das.^[3] In this study, out of the 10 accessory appendicular arteries 8 had originated from the posterior caecal artery and 2 had branched from the common caecal artery. Accessory appendicular arteries branching from the posterior caecal artery has been reported by Bergmann.^[8]

CONCLUSION: Normally the appendicular artery originates from the inferior division of the ileocolic artery but it may also originate directly from the ileocolic artery. Variations in its origins and in particular knowledge of accessory appendicular arteries should be kept in mind by the operating surgeons to avoid complications during appendicectomy.

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AUTHORS:

1. Sanjay Kumar Sinha
2. Vishal Parmar
3. Jay Prakash Bharti

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Anatomy, Katihar Medical College.
2. Assistant Professor, Department of General Medicine, Katihar Medical College.
3. Tutor, Department Anatomy, Patna Medical College.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Sanjay Kumar Sinha,
Associate Professor,
Department of Anatomy,
Katihar Medical College,
Katihar - 854105, Bihar.
E-mail: dr.s.k.sinha.2709@gmail.com

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