Introduction

Brachial artery is the main artery of the arm. It is a continuation of axillary artery at the lower border of teres major muscle. It usually terminates at the level of neck of radius in the cubital fossa by dividing into radial and ulnar arteries. The radial artery runs along the lateral part of the front of the forearm with the superficial branch of radial nerve. The ulnar artery passes medially deep to the pronator teres muscle and then runs to the distal part of the forearm together with the ulnar nerve. Though the branches of radial and unlar arteries take part in the anastomosis around the elbow joint, direct anastomosis between radial and ulnar artery is a rare occurrence. We saw such a direct anastomosis between radial and ulnar arteries in the cubital fossa, which we name as median cubital arch. The radial artery also had a high origin.

Case Report

During regular dissections for undergraduate medical students at Melaka Manipal Medical College (Manipal Campus) we encountered arterial variations in a formalin embalmed male cadaver aged approximately 65 years. The variations found were in the right upper limb and were unilateral. The brachial artery was very short. It terminated by dividing into radial and ulnar arteries just below the lower border of teres major muscle (Figure 1). At the origin, the radial artery was medial to the ulnar artery. It first passed medially deep to the median nerve and then crossed it on its superficial aspect from medial to lateral. In the lower part of the arm the radial artery also crossed the ulnar artery from medial to lateral side (Figure 2). At the cubital fossa, the radial and ulnar arteries were connected to each other by an arterial arch. The variations reported here are very useful for the radiologists as these variations can cause problems in invasive procedures. © IJAV 2010; 3: 158–159.

ABSTRACT

Occurrence of a median cubital arterial arch is very rare. We saw a superficially placed median cubital arterial arch associated with high level of origin of radial artery. The radial artery took origin from the brachial artery in the upper third of the arm and crossed median nerve and ulnar artery from medial to lateral side. The course and distribution of the vessels in the forearm was normal. In the cubital fossa, the radial and ulnar arteries were connected to each other by an arterial arch. The variations reported here are very useful for the radiologists as these variations can cause problems in invasive procedures. © IJAV 2010; 3: 158–159.

Key words (median cubital arterial arch) (radial artery) (ulnar artery) (brachial artery) (variation)
Median cubital arterial arch with high origin radial artery

In the current case, the radial artery crossed the median nerve twice; first from lateral to medial deep to the median nerve and then medial to lateral superficial to the nerve. It also crossed the ulnar artery from medial to lateral side. This course of the radial artery may be clinically significant as it might compress the median nerve or ulnar artery or it might get compressed deep to the median nerve. The presence of the median cubital arch may be advantageous for the blood supply of muscles and for collateral circulation. At the same time, it may bleed severely in superficial injuries. So knowledge of occurrence of such unusual arterial arch may be useful for plastic and orthopedic surgeons.

References