

A Study of Branching Pattern of Femoral Artery in Femoral Triangle in Cadavers

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Research Article

Abstract: Femoral artery is an area of interest for interventionalists. This study of 60 femoral arteries reveals posterior origin of profunda femoris from femoral artery more frequently. Medial circumflex femoral artery found to be arising more proximally than lateral. This artery more commonly originates from femoral artery than its lateral counterpart. It is also found absent in 2 cases.

Key words: Profunda femoris artery, medial circumflex femoral artery, lateral circumflex femoral artery.

Introduction

The course and ramification of the vessels of the lower limbs are important for anatomists and surgeons. It is used for investigation of any arterial system in the body and for various clinical procedures like coronary angioplasty. Femoral artery at the femoral triangle is directly opened at the origin of the profunda femoris artery for femoral embolectomy in lower limb arterial thromboembolism. In all these cases the anatomical knowledge of the profunda femoris artery and the circumflex arteries is very important to prevent inadvertent damage to these during clinical procedures.

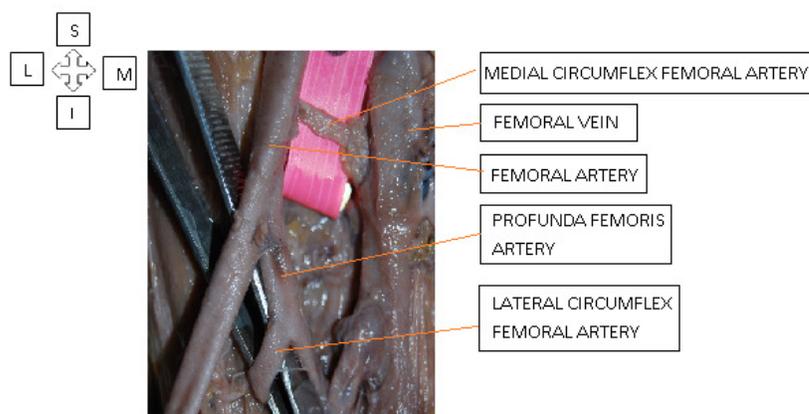
Aim and Objectives:

- To identify the pattern of ramification of these arteries
- To determine site of origin of profunda femoris

- The distance of origin of profunda femoris from the midpoint of the inguinal ligament
- The site of origin of the lateral circumflex femoral artery
- The distance of origin of the lateral circumflex femoral artery from origin of profunda femoris artery
- The site of origin of the medial circumflex femoral artery
- The distance of origin of the medial circumflex femoral artery from origin of profunda femoris artery

Materials and Method

Dissections of 60 femoral triangles in 30 human cadavers. Femoral artery and the profunda femoris artery with its medial and lateral circumflex femoral branches were dissected and their origins were identified. Distance of the site of origin of the profunda was measured from the mid point between the anterior superior iliac spine and the pubic tubercle in millimeters with a scale. Sites of origin of the medial and lateral circumflex femoral arteries were also studied and the distance of site of origin of each of them were measured from the origin of profunda femoris artery.



Posterior Origin of Profunda Femoris Artery with Medial Circumflex Femoral Artery Branching from Femoral Artery in Right Lower Limb

Results

Table 1: Position of Origin of Profunda Femoris Artery

POSITION	RIGHT	LEFT
POSTERIOR	17	15
POSTEROLATERAL	5	6
LATERAL	8	9

Table 2: Distance Between Mid Inguinal Point to Origin of Profunda Femoris Artery

RANGE (mm)	NO. ON RIGHT	NO. ON LEFT
11-20	4	2
21-30	4	8
31-40	8	8
41-50	10	6
51-60	4	3
61-70	-	3

Table 3: Distance of Origin of Lateral Circumflex Femoral Artery from Origin of Profunda Femoris

RANGE (mm)	NO. ON RIGHT	NO. ON LEFT
1-10	4	5
11-20	7	8
21-30	12	7
31-40	1	3
41-50	3	3

Table 4: Distance of Origin of Medial Circumflex Femoral Artery from Origin of Profunda Femoris

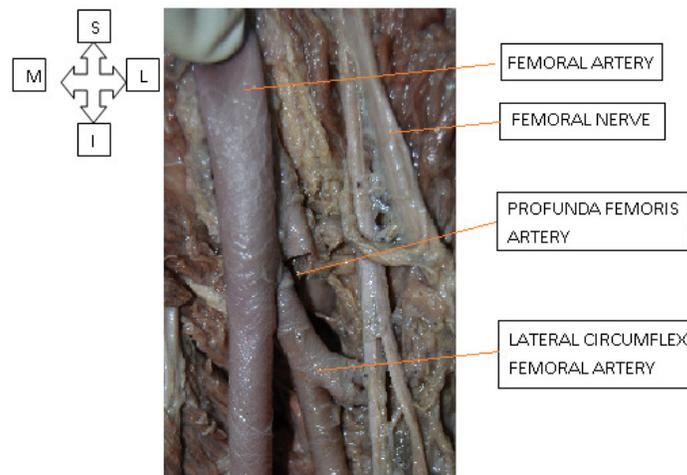
RANGE (mm)	NO. ON RIGHT	NO. ON LEFT
1-10	9	10
11-20	5	3
21-30	4	3
31-40	0	2
AB	2	1

Table 5: Distance of Origin of Lateral Circumflex Femoral Artery from Mid Inguinal Point when it is Branch from Femoral Artery

RANGE (mm)	NO. ON RIGHT SIDE	NO. ON LEFT SIDE
21-30	1	1
31-40	2	1
41-50	1	1

Table 6: Distance of Origin of Medial Circumflex Femoral Artery from Mid Inguinal Point when it is Branch from Femoral Artery

RANGE (mm)	NO. ON RIGHT	NO. ON LEFT
21-30	2	4
31-40	2	3
41-50	3	3



Posterior Origin of Profunda Femoris Artery from Femoral Artery in Left Lower Limb.

Discussion

The origin of the profunda femoris artery in our study is placed more distally than the other studies. There is no significant difference in origin of the left and the right profunda artery. The average distance of origin was 36.9mm when both sides taken together. The profunda started laterally when it originates closer to the inguinal ligament. The lateral circumflex femoral artery and medial circumflex femoral artery commonly originate from the profunda femoris artery close to the origin of the profunda femoris artery. Origin both medial and lateral circumflex femoral arteries from femoral artery was commonly on left side than right. Medial circumflex femoral artery commonly originates (16%) from femoral than lateral circumflex femoral artery, this finding differs from the study of Dixit et al.

Conclusions

Profunda femoris commonly originates from posterior aspect of the trunk of femoral artery. Origin of right Profunda femoris is more distal than left. Medial circumflex femoral artery commonly originates proximally from trunk of Profunda femoris than lateral circumflex femoral artery. Medial circumflex femoral artery was found more frequent for branching from femoral artery than lateral.

References

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