



A Temporal Analysis of Technical Videos for Common Femoral Artery Access

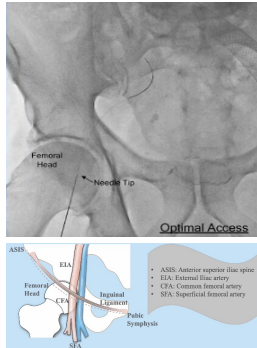
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Introduction

- The **common femoral artery** is the most used access site among various endovascular specialties including **interventional radiology, vascular surgery, neurosurgery, and cardiology**.
- The internet has become a common resource for medical education but the **quality of technical videos for femoral access publicly available has not been assessed**. Yet, the techniques of femoral access continue to evolve.



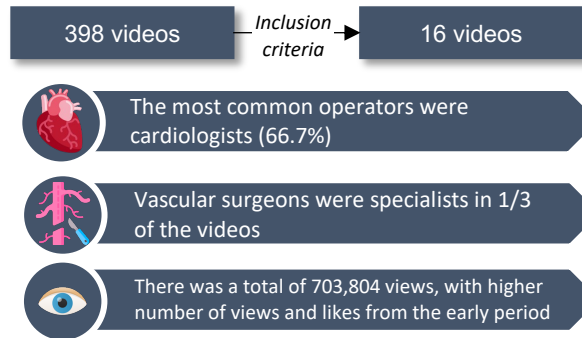
Purpose

- The goal of this study was to review the available technical videos for **femoral access** on the internet and examine their **evolution**.

Methods

- A Google search using term combinations denoting **femoral access** was conducted.
- All videos were reviewed to include **technical illustration**.
- The **date of publication, specialty of operator, and characteristics of the technique** as well as **media** were captured.
- A comparison between the **early (2011-2016)** and **contemporary (2017-2021)** periods of publication was performed.

Results



- Only 12.5% of videos did not use any image guidance and relied on **palpate-and-stick technique**. However, videos using **dual imaging (fluoroscopy and ultrasound)** significantly increased in the contemporary period (0 vs 62.5%, P=0.025, Table 1).
- The description of **anatomical landmarks** including the inguinal ligament and the use of micropuncture did not change.
- There was a trend towards gaining access at the optimal puncture site **over the lower half of the femoral head** that did not reach statistical significance (37.5% vs 75%, P=0.315, Table 1).

Results

	Early (2011-2016) (n=8)	Contemporary (2017-2021) (n=8)	P-Value
Operator Specialty			
Vascular Surgery	1 (12.5)	3 (37.5)	0.569
Interventional Radiology	1 (12.5)	0 (0)	-
Interventional Cardiology	4 (50.0)	4 (50.0)	-
Neurosurgery	2 (25.0)	1 (12.5)	-
Media Characteristics			
Video Duration (min)	17.9 ± 33	14.6 ± 19.8	0.793
Views (mean ± std dev)	111,089 ± 158,120	6,212 ± 6,891	0.05*
Likes (mean ± std dev)	316.5 ± 468.5	76.7 ± 90.8	0.81
Live demonstration	7 (87.5)	4 (50)	0.282
Pictorial demonstration	3 (37.5)	6 (75)	0.315
Technical Characteristics			
Fluoroscopic guidance	3 (37.5)	7 (87.5)	0.119
Ultrasound guidance	3 (37.5)	6 (75)	0.315
Dual Image guidance	0	5 (62.5)	0.03*
Anatomic landmarks	5 (62.5)	7 (87.5)	0.569
Inguinal Ligament	4 (50)	6 (75)	0.608
Use of Micropuncture	4 (50)	4 (50)	1
Optimal puncture site	3 (37.5)	6 (75)	0.315

Conclusions

- Videos for femoral access are **highly viewed** on the internet and are an **important dissemination tool**.
- A **multidisciplinary universal femoral access video** was developed at Yale and could improve technical gaps noted on prior online videos:

<https://player.vimeo.com/video/713050384?h=a5fa54f2df>