

# ANATOMICAL ORIGIN AND MORPHOMETRIC STUDY OF THE INFERIOR GLUTEAL ARTERY IN VIETNAMESE CADAVERS

LE QUANG TUYEN, TRAN PHUONG NAM\*, NGUYEN THIEN DUC, NGUYEN VAN HUNG, NGUYEN PHI TRINH, NGUYEN AN NINH



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Department of Anatomy - Embryology,  
University of Health Sciences

## Correspondence

**TRAN PHUONG NAM**, Department of Anatomy - Embryology, University of Health Sciences

Email: tpsnam@uhsvnu.edu.vn

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## ABSTRACT

**Objectives:** The inferior gluteal artery (IGA) is a principal vascular structure supplying the gluteal region, with significant relevance in reconstructive and pelvic surgery. Despite its clinical importance, population-specific anatomical data in Vietnamese individuals remain limited. This study aimed to comprehensively evaluate the origin, vertebral levels, morphometric characteristics, and spatial distribution of the IGA in Vietnamese cadavers.

**Subjects and Methods:** A descriptive cadaveric study was conducted on 30 hemipelves obtained from 15 formalin-fixed adult Vietnamese cadavers. Dissections were performed following a standardized anatomical protocol to ensure consistency. Recorded parameters included the arterial origin, vertebral levels of origin and pelvic exit, length, diameter, and spatial coordinates relative to the sacral promontory. Morphometric measurements were obtained using digital calipers and analyzed within a two-dimensional Cartesian coordinate system.

**Results:** The IGA most frequently originated from the anterior division of the internal iliac artery (86.7%), whereas 13.3% arose from the posterior division. The predominant vertebral level of origin was S2–S3 (46.67%), followed by S3–S4 (26.67%). The most common pelvic exit level was S3–S4 (33.33%). The mean arterial length and diameter were  $23.99 \pm 8.93$  mm and  $5.22 \pm 1.36$  mm, respectively. No statistically significant differences were observed between the left and right sides, indicating marked bilateral symmetry. Spatial analysis demonstrated that arterial origins consistently clustered lateral and inferior to the sacral promontory.

**Conclusions:** The IGA in Vietnamese cadavers exhibits a relatively consistent origin, predictable vertebral topography, and high bilateral symmetry. Its spatial relationship to the sacral promontory provides a reliable anatomical landmark for surgical orientation. These findings may contribute to improved preoperative planning and help reduce vascular complications in reconstructive and pelvic surgical procedures.

**Key words:** inferior gluteal artery, internal iliac artery, anatomical variation, cadaver study, Vietnamese population

## INTRODUCTION

The inferior gluteal artery, a terminal branch of the internal iliac artery, plays a crucial role in the vascularization of the gluteal region, supplying the gluteus maximus muscle, adjacent skin, and deep pelvic structures. It exits the pelvis via the infrapiriform foramen, typically between the sacral nerves S2 and S3, though this trajectory and its morphometry exhibit notable anatomical variability<sup>1</sup>.

The anatomical understanding of the IGA has gained increasing relevance due to its implications in reconstructive surgery, particularly in musculocutaneous and perforator flap harvests for gluteal and breast reconstruction. Despite its clinical significance, anatomical studies on the IGA remain relatively limited, and existing findings often differ in terms of origin, length, diameter, and branching patterns. Akiyama et al. (2016) highlighted the impor-

tance of the IGA preservation in pelvic oncological surgery, demonstrating that inadvertent injury at the greater sciatic notch can lead to flap necrosis and hemorrhage<sup>2</sup>. Moreover, Gabryszuk et al. (2024) proposed a novel classification system of the IGA origin types, noting a predominant anterior division origin in over 60% of cases<sup>1</sup>.

Population-specific anatomical data are increasingly recognized as essential for safe surgical planning, as pelvic morphology and vascular anatomy may vary according to ethnicity, body habitus, and anthropometric characteristics<sup>3</sup>. Previous anthropometric studies have demonstrated that Southeast Asian populations, including Vietnamese individuals, differ from Western populations in pelvic dimensions, sacral curvature, and body proportionality, factors that may influence the course, branching pattern, and spatial relationships of pelvic vessels<sup>4</sup>. How-

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ever, most existing anatomical studies of the inferior gluteal artery have been conducted in European or East Asian populations, with limited data available for Vietnamese subjects. This lack of population-specific evidence may limit the applicability of current anatomical references in local reconstructive and pelvic surgery. Therefore, a detailed morphometric and topographical analysis of the inferior gluteal artery in Vietnamese cadavers is warranted to provide clinically relevant anatomical data tailored to this population.

Given the lack of population-specific anatomical data, this study investigates whether the anatomical origin, vertebral topography, and morphometric characteristics of the inferior gluteal artery are consistent in Vietnamese adult cadavers and how these findings may inform clinical and surgical practice.

This study aims to:

1. Determine the origin and vertebral level of the IGA and its point of exit from the pelvis.
2. Analyze morphometric parameters, including length and diameter, and assess bilateral symmetry.
3. Map spatial coordinates of the arterial origin relative to bony landmarks, particularly the sacral promontory.

## MATERIALS AND METHODS

### Materials

This study was conducted on 30 hemipelvises obtained from 15 formalin-fixed adult Vietnamese cadavers (9 males and 6 females), donated to the Department of Anatomy – Embryology, University of Health Sciences and the Department of Anatomy, Pham Ngoc Thach University of Medicine. All cadaveric specimens were fixed in 10% formalin prior to dissection. All specimens were free from pathological abnormalities, pelvic trauma, or previous surgical interventions in the gluteal region. Cadavers were dissected in the supine position, and the pelvic cavity was accessed by removing overlying soft tissues to expose the internal iliac artery and its branches.

### Research Methods

This study was designed as a descriptive cadaveric case series. Each dissection followed a standardized anatomical protocol to identify the inferior gluteal artery at its branching point from the anterior division of the internal iliac artery, as well as to document its course and exit from the pelvic cavity. The vertebral levels of arterial origin and pelvic exit were determined using fixed bony landmarks, with particular reference to the sacral promontory. Overlapping

vertebral levels (e.g., S2–S3, S3–S4) were used to indicate arterial origins or exit points located at intervertebral disc regions, as determined by fixed bony landmarks. Morphometric parameters, including the arterial length (from its origin to the pelvic exit point) and external diameter at the origin, were measured using digital calipers with a precision of 0.01 mm. To analyze the spatial distribution of the IGA origin, a two-dimensional Cartesian coordinate system was established with the sacral promontory as the origin (0,0). The mediolateral distance was defined as the linear distance from the origin of the inferior gluteal artery to the vertical line passing through the sacral promontory, whereas the superoinferior distance was defined as the linear distance from the arterial origin to the horizontal line passing through the sacral promontory (Figure 1). The negative values indicating positions inferior to this landmark and positive values indicating superior positions.



**Figure 1:** Cartesian coordinate system used to localize the origin of the inferior gluteal artery relative to the sacral promontory. "Source: Authors".

### Data Processing

All data were entered into Microsoft Excel and subsequently analyzed using STATA version 18.0 (StataCorp, College Station, TX, USA). Descriptive statistics, including mean, standard deviation, minimum, and maximum values, were calculated for arterial length and diameter.

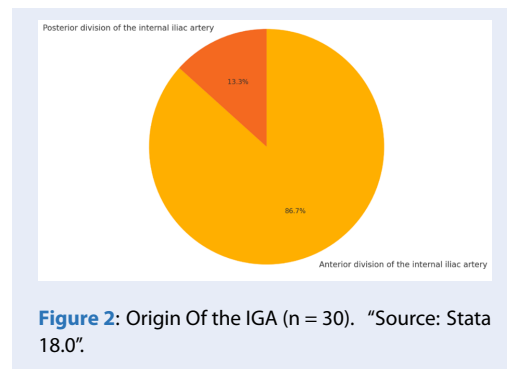
The distribution of vertebral levels of arterial origin and exit was summarized using frequency tables and percentages. Spatial coordinates of the IGA origins were plotted on two-dimensional scatter graphs generated using STATA, enabling visualization of clustering patterns in relation to the sacral promontory and other anatomical landmarks.

### Ethical Considerations

This cadaveric study was reviewed and approved by the Ethics Committee of the University of Health Sciences under Decision No. 36/KHSK-HĐĐĐ/GCN, dated December 10, 2025. All procedures involving human cadaveric material were approved by the institutional Ethics Committee of the University of Health Sciences.

## RESULTS

### Distribution of the Arterial Origin of the IGA



**Figure 2:** Origin Of the IGA (n = 30). "Source: Stata 18.0".

As illustrated in Figure 2, the majority of inferior gluteal arteries (86.7%) originated from the anterior division of the internal iliac artery. In contrast, only 13.3% of the arteries arose from the posterior division. Table 1 illustrates the origin of the IGA varied across multiple sacral levels, with S2–S3 being the most common site of origin, accounting for 46.67% of cases. This was followed by S3–S4 (26.67%) and S3 (10.00%). Less frequent origins included S1, S1–S2, S2, S4, and S4–S5, each observed in only 3.33% of cases.

Regarding the point at which the artery exited the pelvis into the gluteal region, the most common level was S3–S4 (33.33%), followed by S4 (30.00%) and S3 (16.67%). Exit points at S2–S3, S4–S5, S2, and S3–S3 were less frequent.

### Descriptive Morphometry of the IGA

Table 2 illustrates the mean length of the IGA in the studied Vietnamese cadaveric sample was 23.99 mm (SD = 8.93 mm), with a minimum value of 9.9 mm and a maximum of 46.3 mm. The mean diameter was 5.22 mm (SD = 1.36 mm), ranging from 3.7 mm to 9.1 mm.

Table 3 illustrates the mean length of the IGA was 24.13 mm (SD = 10.29 mm) on the left side and 23.85 mm (SD = 7.70 mm) on the right side. The 95% confidence intervals for the mean values were 18.43–29.82

**Table 1: Distribution of Vertebral Levels of Origin and Exit Points of the IGA. "Source: Stata 18.0".**

Level	Origin – Freq.	Origin – %	Exit – Freq.	Exit – %
S1	1	3.33	0	0
S1–S2	1	3.33	0	0
S2	1	3.33	1	3.33
S2–S3	14	46.67	2	6.67
S3	3	10.00	5	16.67
S3–S3	0	0	1	3.33
S3–S4	8	26.67	10	33.33
S4	1	3.33	9	30.00
S4–S5	1	3.33	2	6.67
To-tal	30	100.00	30	100.00

**Table 2: Descriptive statistics of the length and diameter of the IGA. "Source: Stata 18.0".**

Variable	Obs	Mean	Std. Dev.	Min	Max
Length of inferior gluteal artery	30	23.99	8.93	9.9	46.3
Diameter of inferior gluteal artery	30	5.22	1.36	3.7	9.1

mm and 19.59–28.11 mm, respectively. A two-sample t-test assuming equal variances revealed no statistically significant difference between the two sides ( $p = 0.9333$ ;  $t = 0.0844$ ;  $df = 28$ ), indicating that the artery demonstrates a high degree of bilateral symmetry in terms of morphometric length.

Table 4 illustrates the mean diameter of the IGA was 5.22 mm (SD = 1.48 mm) on the left side and 5.21 mm (SD = 1.29 mm) on the right side. The 95% confidence intervals for the mean values were 4.40–6.04 mm and 4.50–5.93 mm, respectively. The difference between the two sides was negligible (mean difference = 0.0067 mm), and the result of a two-sample t-test assuming equal variances indicated no statistically significant difference ( $p = 0.9896$ ;  $t = 0.0132$ ;  $df = 28$ ). The 95% confidence interval for the mean difference ranged from –1.03 mm to 1.04 mm, suggesting a high

**Table 3: Descriptive statistics and side-by-side comparison of the IGA length. "Source: Stata 18.0".**

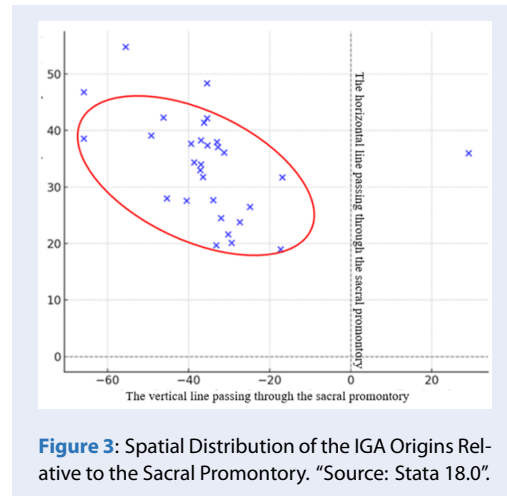
Group	Obs	Mean (mm)	Std. Err.	Std. Dev.	95% Confidence Interval (mm)
Left	15	24.13	2.66	10.29	18.43 – 29.82
Right	15	23.85	1.99	7.70	19.59 – 28.11
Combined	30	23.99	1.63	8.93	20.65 – 27.32
Difference (Left – Right)		0.28	3.32		-6.52 – 7.08

**Table 4: Comparing the diameter of the IGA between left and right sides. "Source: Stata 18.0".**

Group	Obs	Mean (mm)	Std. Err.	Std. Dev.	95% Confidence Interval (mm)
Left	15	5.22	0.38	1.48	4.40 – 6.04
Right	15	5.21	0.33	1.29	4.50 – 5.93
Combined	30	5.22	0.25	1.36	4.71 – 5.72
Difference (Left-Right)		0.01	0.51		-1.03 – 1.04

degree of bilateral symmetry in the diameter of the IGA.

**Spatial Mapping of the Origin of the IGA**



**Figure 3: Spatial Distribution of the IGA Origins Relative to the Sacral Promontory. "Source: Stata 18.0".**

Figure 3 illustrates the spatial distribution of the origin points of the IGA relative to the sacral promontory, plotted on a two-dimensional coordinate system. Each dot represents an individual measurement, with the horizontal axis indicating the lateral distance from the midline and the vertical axis representing the inferior distance from the promontory line. The majority of origin points were located lateral and inferior to the promontory, clustering between -60 mm and -

20 mm horizontally, and 25 mm to 45 mm vertically.

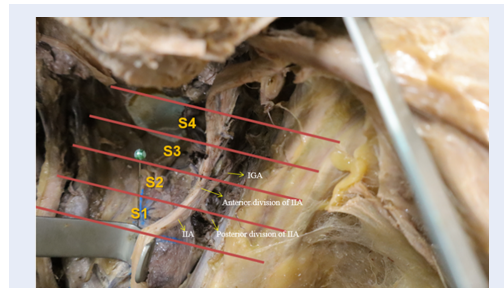
**DISCUSSION**

**Distribution of the Arterial Origin of the IGA**

The current study investigated the anatomical variations in the origin of the IGA. Our findings revealed that a majority of the inferior gluteal arteries (86.7%) originated from the anterior division of the internal iliac artery, while a smaller proportion (13.3%) arose from the posterior division. These results align closely with previous anatomical studies. For instance, Gabryszuk et al. (2024) identified a predominant type of origin from the anterior division in 62.3% of cases, further substantiating the anterior division as the common source of the IGA.

Similarly, Georgantopoulou et al. (2014) described extensive anatomical variations but consistently highlighted the prevalence of anterior division origins<sup>3</sup>. Song et al. (2006) also demonstrated variability in the IGA branching, emphasizing the clinical significance in musculocutaneous flap surgeries where detailed anatomical variations in the origin of the IGA knowledge significantly reduces the risk of surgical complications<sup>4</sup>. Moreover, Kankaya et al. (2006) indicated a mean vessel length of around 6.4 cm and a diameter of approximately 1.1 mm, emphasizing the precise morphometric characterization required for surgical planning<sup>5,6</sup>. In the present study, the anterior division was likewise identified as the predominant origin of the IGA, further supporting existing anatomical literature.

The current study examined anatomical variations in the vertebral levels of origin and exit points of the IGA. Our results indicated that the most frequent vertebral level of origin for the IGA was S2–S3 (46.67%), followed by S3–S4 (26.67%) and S3 (10.00%). Rare origins were observed at levels S1, S1–S2, S2, S4, and S4–S5, each accounting for only 3.33% of cases. Regarding the exit points, the IGA most commonly exited at the S3–S4 level (33.33%), closely followed by S4 (30.00%) and S3 (16.67%). Less frequent exit levels included S2–S3, S4–S5, S2, and an unusual instance at S3–S3 (Figure 4).



**Figure 4:** Pelvic dissection showing the origin of the inferior gluteal artery from the anterior division of the internal iliac artery at the S2–S3 level. “Source: Authors”.

These findings align with earlier studies. For example, Gabryszuk et al. (2024) and Georgantopoulou et al. (2014) similarly reported a significant prevalence of IGA origins around the S2–S4 vertebral levels, underscoring the consistent variability observed across studies<sup>3</sup>. Additionally, these observations are supported by Kankaya et al. (2006), who emphasized the relevance of these variations in surgical planning and intervention<sup>2</sup>.

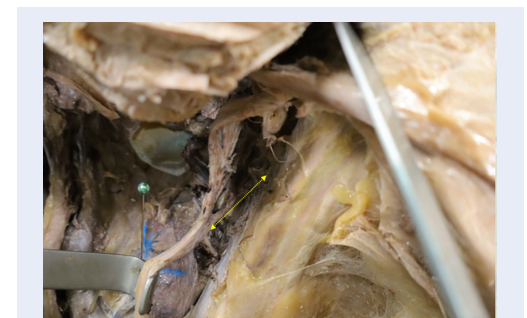
Determining the vertebral levels of the IGA origin and exit points is valuable in reconstructive and orthopedic surgeries involving the pelvic and gluteal regions. For instance, in IGAP flap techniques described by Georgantopoulou et al. (2014), knowledge of precise vertebral levels (typically S2–S4) allows surgeons greater control during dissection, reducing the risk of unintended vascular damage and improving surgical outcomes<sup>3,4</sup>. Prior studies consistently affirm that precise awareness of vertebral levels significantly enhances outcomes in complex pelvic surgeries, such as sacral tumor resections and vascular interventions.

### Descriptive Morphometry of the IGA

The present study shows the mean length of the IGA was found to be 23.99 mm (SD = 8.93 mm), ranging

between 9.9 mm and 46.3 mm, while the mean diameter was 5.22 mm (SD = 1.36 mm), with a range of 3.7 mm to 9.1 mm. This notable difference likely reflects variations in measurement with previous findings by Gabryszuk et al. (2024), who reported a median length of approximately 68.50 mm and a diameter around 4.69 mm, indicating variability across populations and methodologies<sup>1</sup>. The shorter mean length of the inferior gluteal artery observed in the present study compared with previous reports may be explained by several factors, including differences in measurement definitions, population-specific pelvic morphology, and tissue shrinkage associated with formalin fixation. In particular, arterial length in this study was defined strictly as the distance from the branching point at the internal iliac artery to the pelvic exit (Figure 5), whereas other studies measured longer arterial segments, often extending beyond the pelvic cavity<sup>5,6</sup>.

First, differences in measurement methodology may have contributed to the observed variation, as Gabryszuk et al. measured the IGA along a longer arterial segment, potentially including portions beyond the pelvic exit, whereas the present study defined arterial length strictly as the distance from the origin at the internal iliac artery to the pelvic exit point. Second, population-related anatomical variability may play a role, as pelvic morphology and vascular configuration have been shown to differ across ethnic groups, which could influence arterial course and length. Third, all specimens in the present study were formalin-fixed, and tissue shrinkage associated with fixation may have resulted in shorter measured arterial lengths compared with studies using fresh cadaveric material<sup>1</sup>.



**Figure 5:** The length of the inferior gluteal artery (IGA) was measured as the linear distance from the arterial origin at the internal iliac artery to the pelvic exit point (Arrow). “Source: Authors”.

Furthermore, our study evaluated bilateral symmetry in the morphometry of the IGA, demonstrating

that there was no statistically significant difference in length or diameter between the left and right sides. Specifically, the mean lengths on the left and right sides were 24.13 mm (SD = 10.29 mm) and 23.85 mm (SD = 7.70 mm), respectively, with the diameter averaging 5.22 mm on both sides (SD left = 1.48 mm, SD right = 1.29 mm). Statistical analysis confirmed the absence of significant side differences (length:  $p = 0.9333$ ; diameter:  $p = 0.9896$ ), supporting a high degree of bilateral symmetry. This finding aligns with similar symmetry observations noted in the literature (Georgantopoulou et al., 2014)<sup>3</sup>. Morphometric parameters such as length and diameter of the IGA are critically important in microsurgical musculocutaneous flap harvesting, especially in post-mastectomy breast reconstruction. Song et al. (2006) confirmed that optimal length and diameter of the IGA are key determinants for effective microsurgical planning, ensuring adequate blood flow to the flap, thereby increasing flap viability and reducing postoperative complications such as necrosis or ischemia<sup>4</sup>. Kankaya et al. (2006) also emphasized the importance of these morphometric parameters in microsurgical procedure planning<sup>2</sup>.

### Spatial Mapping of the Origin of the IGA

The spatial mapping analysis of the IGA origins relative to the sacral promontory revealed a distinct clustering pattern. Specifically, the majority of origin points were predominantly localized lateral and inferior to the sacral promontory, between -60 mm and -20 mm horizontally, and 25 mm to 45 mm vertically. Qualitatively, this consistent clustering pattern defines a reproducible anatomical "safe zone" for the inferior gluteal artery origin, which may enhance intraoperative orientation and reduce the risk of inadvertent vascular injury during pelvic and gluteal surgical procedures. These findings align closely with previous anatomical studies, such as those by Georgantopoulou et al. (2014) and Gabryszuk et al. (2024), which reported similar lateral-inferior distribution patterns in relation to prominent pelvic landmarks<sup>1,3</sup>. Clinically, the detailed spatial mapping of the IGA origin is significant, particularly for surgical procedures involving pelvic or gluteal regions. Precise localization helps surgeons accurately identify and preserve the artery during complex operations, such as gluteal flap surgeries, pelvic reconstructions, and interventional radiological procedures<sup>5</sup>. The defined spatial coordinates facilitate preoperative planning, minimize the risk of vascular complications, and enhance surgical outcomes by providing surgeons with reliable anatomical landmarks<sup>7,8</sup>.

Detailed spatial mapping of the IGA origin is particularly beneficial for IGAP flap harvesting, gluteal reconstruction, and vascular interventional procedures such as embolization of pseudoaneurysms. According to Allen et al. (2006), clearly defined spatial coordinates facilitate accurate arterial localization, reduce operative time, minimize injury to surrounding vascular structures, and enhance the precision and safety of reconstructive interventions<sup>6</sup>.

### Study Limitations

Several limitations of the present study should be acknowledged. First, the relatively small sample size, inherent to cadaveric anatomical research, may have limited the statistical power and generalizability of the findings. Second, detailed anthropometric data of the cadavers (e.g., height, weight, and pelvic dimensions) were unavailable, precluding analysis of potential associations between body habitus and vascular morphology. Consequently, potential covariates such as sex, age, stature, and other anthropometric characteristics were not incorporated into the analysis. Sex-based comparisons were also not performed due to the limited sample size and imbalanced sex distribution.

Statistical analyses were restricted to descriptive statistics and independent side-to-side comparisons. Given the descriptive design and small sample size, advanced analyses such as multivariable modeling or covariate adjustment were not feasible, and formal tests of normality were not conducted prior to the application of independent t-tests. In addition, no cross-analysis between vertebral levels of arterial origin and exit, nor correlations between morphometric parameters and vertebral levels, were performed.

Finally, all specimens were formalin-fixed, and fixation-related tissue shrinkage may have affected morphometric measurements, particularly arterial length. As this was a cadaveric study, the findings should be interpreted with caution when extrapolated to live surgical settings, where vessel caliber, spatial relationships, and soft-tissue dynamics may differ under physiological conditions.

### CONCLUSIONS

This study provides a detailed anatomical and morphometric characterization of the inferior gluteal artery (IGA) in Vietnamese cadavers. The IGA most commonly originates from the anterior division of the internal iliac artery at the S2-S3 vertebral level and exits the pelvis near S3-S4, with high bilateral symmetry in both length and diameter. The consistent clustering of arterial origins lateral and inferior to the sacral

promontory offers reliable anatomical landmarks that may facilitate safer and more accurate surgical dissection. These findings have direct clinical relevance for inferior gluteal artery perforator (IGAP) flap harvesting, gluteal and breast reconstruction, pelvic oncological surgery, sacral and acetabular procedures, as well as interventional radiological techniques involving the internal iliac artery. Incorporating these population-specific anatomical data into preoperative planning may reduce vascular injury, improve flap reliability, and enhance surgical outcomes in pelvic and gluteal interventions.

## LIST OF ABBREVIATIONS USED

Obs: Observations  
 Std. Err: Standard Error  
 Std. Dev: Standard Deviation  
 Min: Minimum  
 Max: Maximum  
 p: p-value  
 t: t-value  
 df: Degrees of Freedom  
 Origin – Freq: Frequency of Arterial Origin  
 Origin – %: Percentage of Arterial Origin  
 Exit – Freq: Frequency of Pelvic Exit Point  
 Exit – %: Percentage  
 IGA: Inferior Gluteal Artery IIA: Internal Iliac Artery  
 SD: Standard Deviation  
 mm: Millimeter

## COMPETING INTERESTS

The authors declare that they have no competing interests.

## AUTHORS' CONTRIBUTIONS

L.Q.Tuyen: Conceptualization, methodology, data collection, writing (original draft).  
 T.P.Nam: Conceptualization, supervision, data analysis, writing (review & editing).  
 N.T.Duc: Data collection, investigation.  
 N.V.Hung: Data collection, validation.  
 N.P.Trinh: Data analysis, visualization.  
 N.A.Ninh: Methodology, supervision.

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## ENDNOTES

This study was conducted as part of the institutional anatomical research program. All measurements and procedures complied with ethical and academic regulations. No external funding was received for this research.

## ILLUSTRATIONS AND FIGURES

Figure 1. Cartesian coordinate system used to localize the origin of the inferior gluteal artery (IGA) relative to the sacral promontory.

Figure 2. Distribution of the anatomical origin of the inferior gluteal artery (IGA) from the internal iliac artery in Vietnamese cadavers (n = 30).

Figure 3. Spatial distribution of the inferior gluteal artery (IGA) origins relative to the sacral promontory plotted on a two-dimensional Cartesian coordinate system.

Figure 4. Cadaveric pelvic dissection showing the origin of the inferior gluteal artery (IGA) from the anterior division of the internal iliac artery at the S2–S3 vertebral level.

Figure 5. Measurement of the length of the inferior gluteal artery (IGA), defined as the linear distance from its origin at the internal iliac artery to the pelvic exit point.

## TABLES AND CAPTIONS

Table 1. Distribution of vertebral levels of origin and exit points of IGA

Table 2. Descriptive statistics of the length and diameter of IGA

Table 3. Side-by-side comparison of IGA length between left and right sides

Table 4. Comparison of IGA diameter between left and right sides

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# NGHIÊN CỨU ĐẶC ĐIỂM GIẢI PHẪU VÀ ĐỊNH KHU CỦA ĐỘNG MẠCH MÔNG DƯỚI TRÊN XÁC NGƯỜI VIỆT NAM TRƯỞNG THÀNH

LE QUANG TUYEN, TRAN PHUONG NAM\*, NGUYEN THIEN DUC, NGUYEN VAN HUNG, NGUYEN PHI TRINH, NGUYEN AN NINH



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## TÓM TẮT

**Mục tiêu:** Động mạch mông dưới có vai trò quan trọng trong cấp máu vùng mông và ý nghĩa trong phẫu thuật tạo hình, phẫu thuật vùng chậu. Tuy nhiên, dữ liệu giải phẫu đặc hiệu cho người Việt Nam còn hạn chế. Nghiên cứu nhằm khảo sát nguyên ủy, mức đốt sống, đặc điểm hình thái và phân bố không gian của động mạch mông dưới trên tử thi người Việt Nam, phục vụ định hướng lâm sàng.

**Đối tượng và phương pháp:** Nghiên cứu mô tả trên 30 nửa khung chậu từ 15 tử thi người Việt Nam trưởng thành cố định formol. Động mạch được phẫu tích theo quy trình chuẩn. Ghi nhận nguyên ủy, mức đốt sống nguyên ủy và điểm thoát, chiều dài, đường kính và vị trí không gian so với ụ nhô xương cùng. Các số đo được thực hiện bằng thước kẹp điện tử và phân tích bằng hệ tọa độ hai chiều.

**Kết quả:** Động mạch mông dưới chủ yếu xuất phát từ ngành trước động mạch chậu trong (86,7%), ít gặp từ ngành sau (13,3%). Mức nguyên ủy thường gặp nhất là S2-S3 (46,67%), tiếp theo S3-S4 (26,67%). Điểm thoát khỏi khung chậu chủ yếu ở mức S3-S4 (33,33%). Chiều dài trung bình là  $23,99 \pm 8,93$  mm và đường kính trung bình  $5,22 \pm 1,36$  mm. Không có khác biệt có ý nghĩa giữa hai bên. Các điểm nguyên ủy tập trung phía ngoài và dưới ụ nhô xương cùng.

**Kết luận:** Động mạch mông dưới ở người Việt Nam có đặc điểm giải phẫu tương đối ổn định, đối xứng hai bên và định khu có thể dự đoán. Phân bố liên quan ụ nhô xương cùng cung cấp mốc định hướng hữu ích trong phẫu thuật tạo hình và can thiệp vùng chậu.

**Từ khoá:** Động mạch mông dưới, động mạch chậu trong, biến thể giải phẫu, nghiên cứu trên xác, người Việt Nam

Bộ môn Giải phẫu học - Phôi thai học,  
Trường Đại học Khoa học Sức khỏe

## Liên hệ

**TRAN PHUONG NAM**, Bộ môn Giải phẫu học - Phôi thai học, Trường Đại học Khoa học Sức khỏe

Email: tpsnam@uhsvnu.edu.vn

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