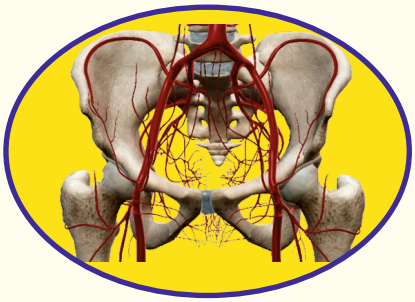
OBSERVATION & RESULT



CHAPTER

5

OBSERVATION & RESULT

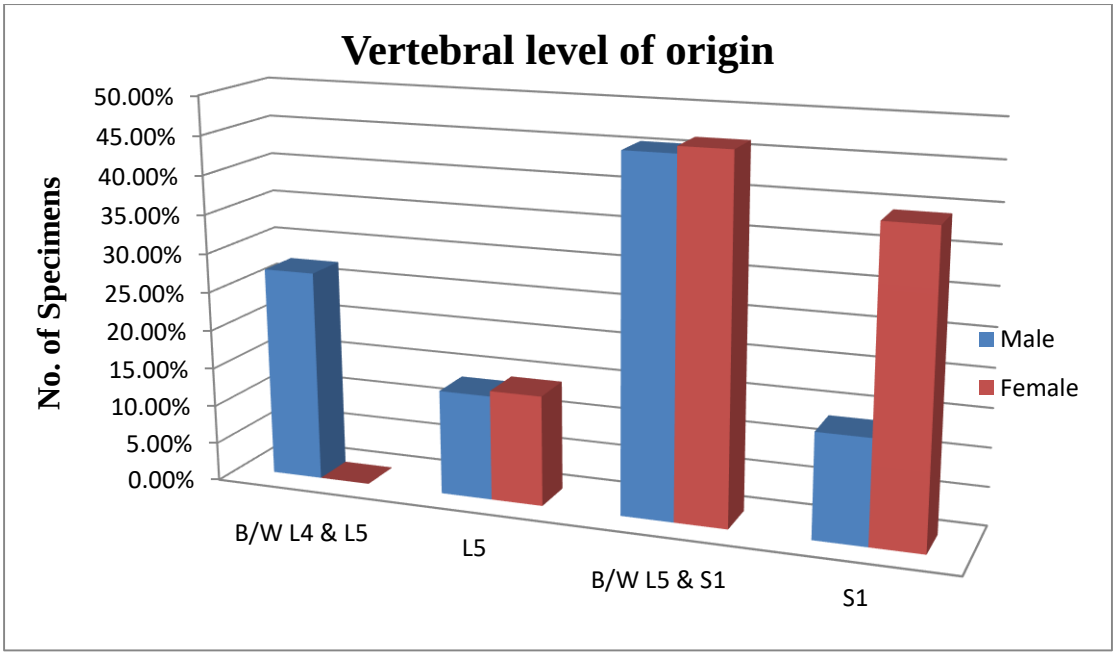
- Total Fifty formalin fixed adult human pelvic halves were dissected (Right 25, Left 25) with known gender.
- 22 were Male Specimen & 28 were Female Specimen.
- Various parameters of the internal iliac artery & its branches were observed
- Recorded observations & Data were enlisted below in detail in form of tables & graphs.
- Relevant well labelled photographs of the dissected specimen including the variations were also explained in detail in respective parameters.
- Following variables were observed during the study :
    - Vertebral level of origin of internal iliac artery
    - Distance of origin of the internal iliac artery to the midsagittal plane
    - Relation of internal iliac artery with sacroiliac joint
    - Length of internal iliac artery
    - Diameter of internal iliac artery
    - Termination patterns of internal iliac artery
    - Level of division of internal iliac artery in respect to Greater sciatic foramen
    - Type of branching pattern of internal iliac artery according to Adachi's classification
    - Origin of Obturator artery
    - Origin of Inferior gluteal artery
    - Origin of Iliolumbar artery
    - Number of Iliolumbar arteries present in the hemi pelvis
    - Origin of Internal pudendal artery
    - Origin of Superior vesical artery
    - Number of Superior vesical arteries
    - Origin of Middle rectal artery

5.1 VERTEBRAL LEVEL OF ORIGIN OF INTERNAL ILIAC ARTERY

- The internal iliac artery takes origin from different vertebral levels varying from L4\ L5 junction to S1 (Table 5.1).
- Notably, the most common vertebral level of origin was at the between L5&S1 intervertebral disk level (23/50).
- Bilateral Asymmetry was also observed in vertebral level of origin of internal iliac artery in many cases as shown in Figure 5.1 in which on the right side origin is higher between L4& L5 while on the left it was between L5 & S1.
- There is a well-marked tendency for the left common iliac artery to bifurcate at a lower vertebral level than the right.
- It was observed that the origin of internal iliac artery between L4 and L5 was found only in males.
- There is also the tendency in females to bifurcate at a lower level & range of variability was also less in female.(Graph 5.1)

Table: 5.1 Origin of internal iliac artery at various vertebral levels

Vertebral level	Male				Female				Total Specimen	
	Right	Left	Total		Right	Left	Total			
	No.	No.	No.	%	No.	No.	No.	%	No.	%
B/W L4 & L5	04	02	06	27.3%	-	-		-	**06**	**12%**
L5	02	01	03	13.6%	02	02	04	14.3%	**07**	**14%**
B/W L5 & S1	04	06	10	45.5%	07	06	13	46.4%	**23**	**46%**
S1	01	02	03	13.6%	05	06	11	39.3%	**14**	**28%**
Total	11	11	22	100%	14	14	28	100%	**50**	**100%**



Graph 5.1: Origin from different vertebral levels

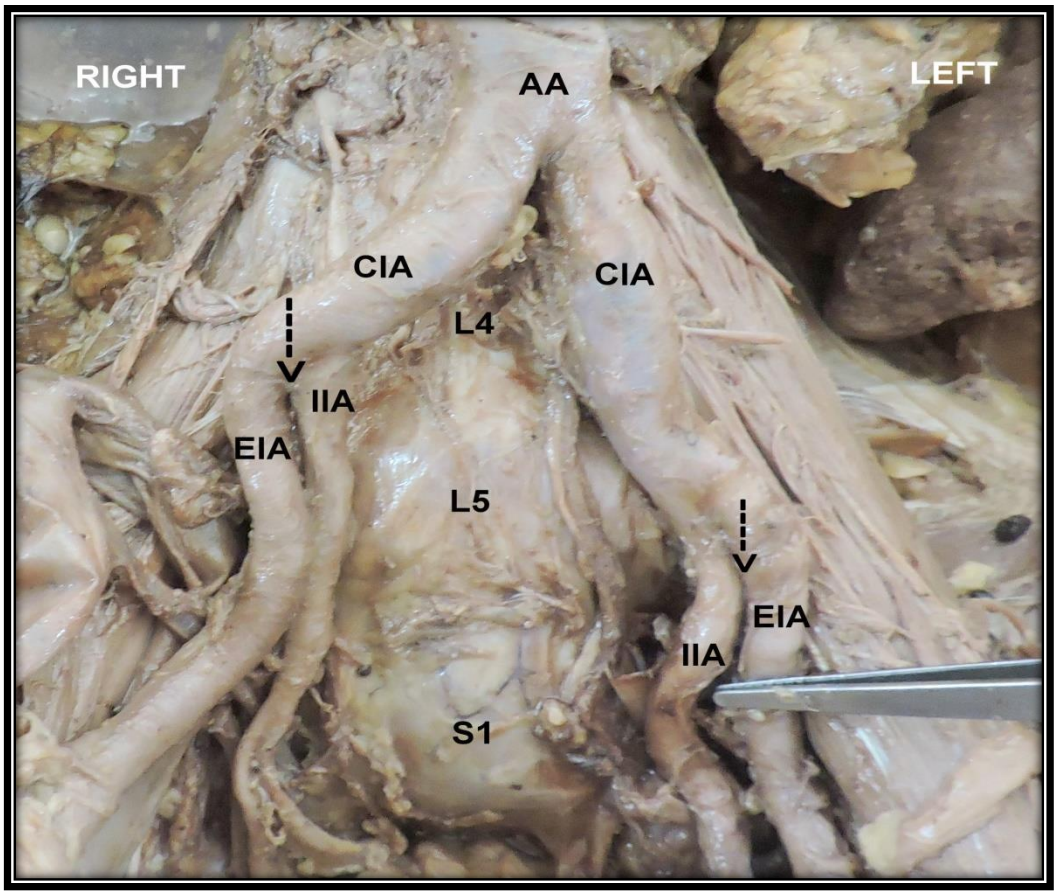


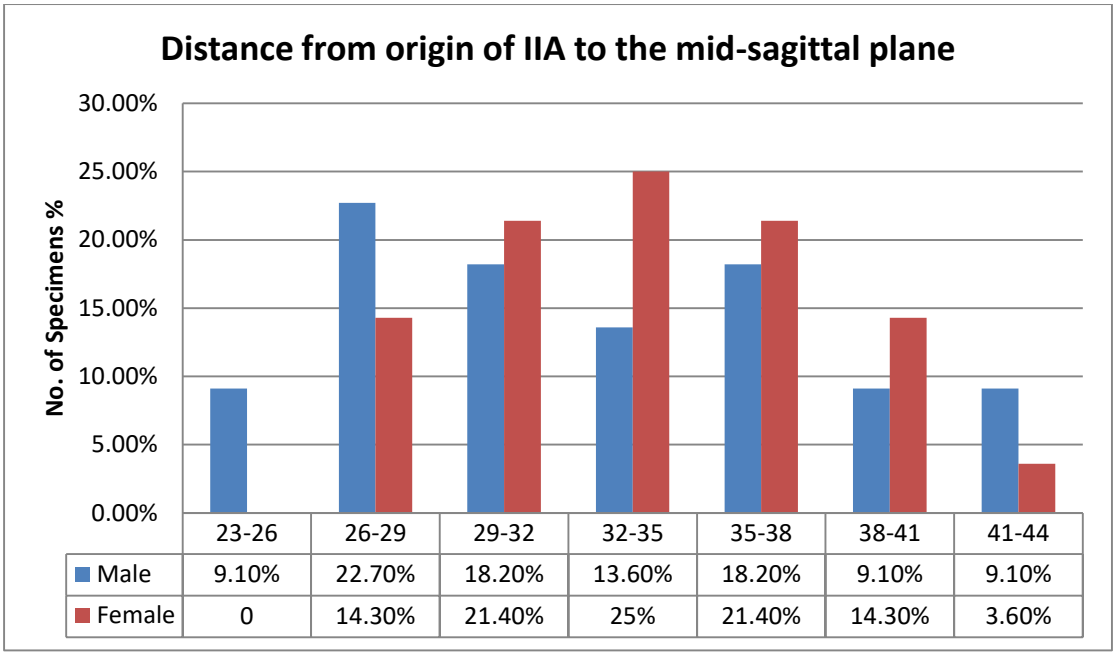
Figure 5.1: Male cadaver showing different vertebral level of origin of internal iliac artery. AA: Abdominal Aorta; CIA: Common iliac artery; EIA: External iliac artery; IIA: internal iliac artery.

5.2 DISTANCE OF ORIGIN OF THE INTERNAL ILIAC ARTERY TO THE MIDSAGITTAL PLANE

- The horizontal distance from the origin of the internal iliac artery to the mid-sagittal plane varies from 23.65mm to 43.26mm in the present study. (Figure 5.2)
- The average distance of the internal iliac artery from the mid-sagittal plane was 33.42mm with Standard Deviation of 4.83. (Table 5.3)
- In majority of specimens (60%) the distance ranged from 29 to 38 mm as shown in Table 5.2.

Table: 5.2 Distance of internal iliac artery's origin to the midsagittal plane

SNo.	Distance from the origin of IIA to the midsagittal plane (mm)	Male (22)		Female (28)		Total no. of Specimen	Percentage
		Right	Left	Right	Left		
1.	**23-26**	02	0	0	0	**02**	**4%**
2.	**26-29**	03	02	03	01	**09**	**18%**
3.	**29-32**	0	04	03	03	**10**	**20%**
4.	**32-35**	02	01	04	03	**10**	**20%**
5.	**35-38**	02	02	04	02	**10**	**20%**
6.	**38-41**	01	01	0	04	**06**	**12%**
7.	**41-44**	01	01	0	01	**03**	**6%**
	Total	11	11	14	14	**50**	**100%**



Graph 5.2: Variation in distance from origin of IIA to the mid-sagittal plane between sexes

- Graph 2 illustrates the distance of the origin of internal iliac artery from the mid-sagittal plane in both sex (male & female specimen)
- The distance was more in Females.

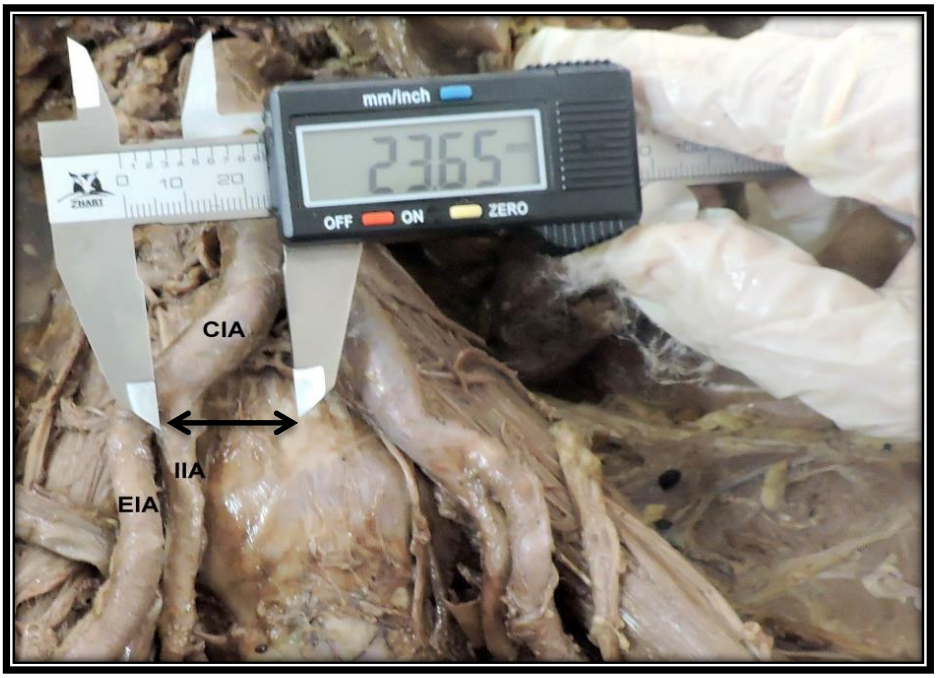


Figure 5.2: Distance of the right internal iliac artery to the midsagittal plane; CIA: Common iliac artery; EIA: External iliac artery; IIA: internal iliac artery.

Table: 5.3 Comparison of Range and Mean distance of internal iliac artery's origin to the midsagittal plane

	Minimum (mm)	Maximum (mm)	Mean (mm)	Standard Deviation
Right	23.65	41.86	32.27	4.75
Left	28.12	43.26	34.57	4.72
Male	23.65	43.26	32.84	5.59
Female	28.37	42.67	33.88	4.18
Overall average	23.65	43.26	33.42	4.83

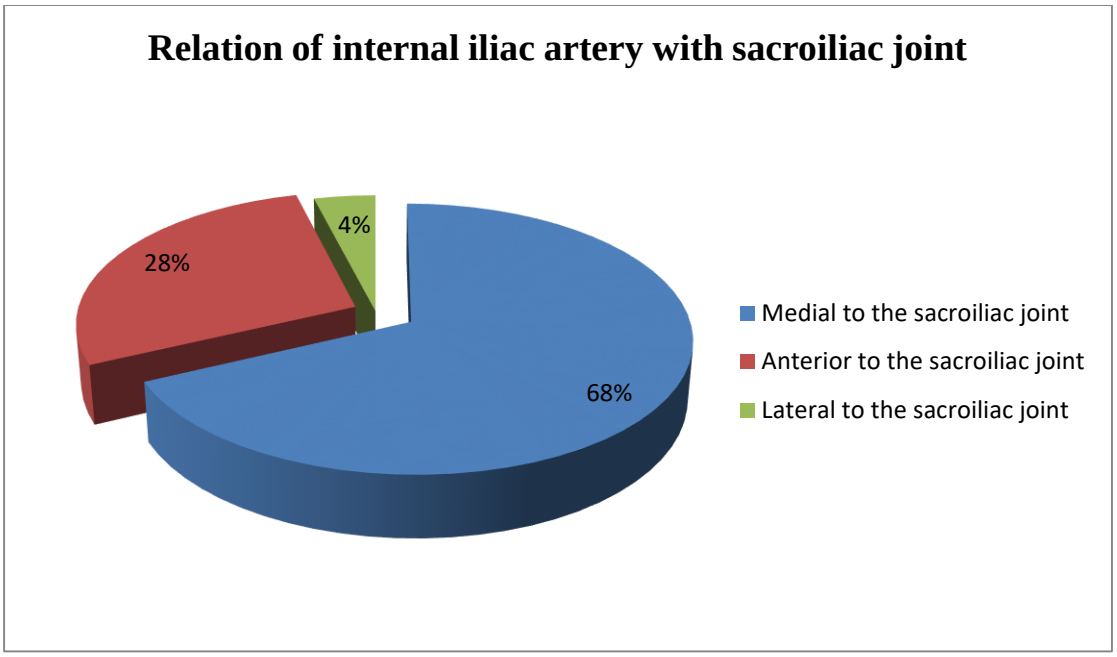
- There is a variation in the distance of the internal iliac artery from the midsagittal plane in relation to gender, in females distances are larger from the midline. (Table 5.3)
- This is probably an adaptative mechanism of the vascularization of the female pelvis & reflects in particular the postpuberal development of the female pelvis acc to Kamina (1891)
- Average distance from the midsagittal plane is more on left side than right as depicted in Table 5.3

5.3 RELATION OF INTERNAL ILIAC ARTERY WITH SACROILIAC JOINT

- Internal iliac artery in most cases lies medial to the sacroiliac joint.
- In one female specimen internal iliac artery lies lateral to the sacroiliac joint on both sides.
- It is related directly anterior to the joint in 28% cases. (Table 5.4)

Table: 5.4 Relation of internal iliac artery with sacroiliac joint

SNo.	Relation	No. of specimens	Percentage
1.	Medial to the sacroiliac joint	34	68%
2.	Anterior to the sacroiliac joint	14	28%
3.	Lateral to the sacroiliac joint	02	4%
	Total	50	100%



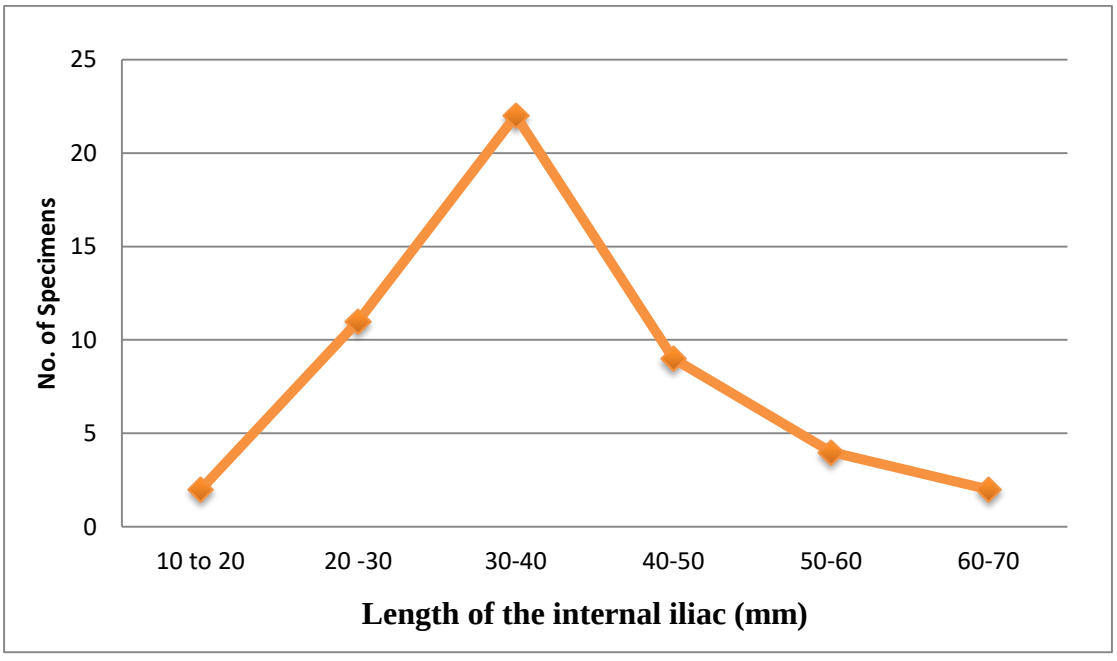
Graph 5.3 Relation of internal iliac artery with sacroiliac joint

5.4 LENGTH OF INTERNAL ILIAC ARTERY

- The length of the internal iliac artery varies considerably. (Table 5.5)
- The length of IIA ranged from the minimum measure of 11.21 mm (Figure 5.3) to the maximum of 66.37 mm.
- However, in majority of specimens (44%) the length of IIA ranged from 30mm to 40 mm.
- The mean length was found to be 38.16 ± 11.22 mm as illustrated in Table 5.6

Table: 5.5 Length of internal iliac artery

SNo.	Length of IIA (mm)	No. of Specimen	Percentage
1.	10 -20	02	4%
2.	20 -30	11	22%
3.	30-40	22	44%
4.	40-50	09	18%
5.	50-60	04	8%
6.	60-70	02	4%
	Total	50	100%



Graph 5.4 Frequency of Length of internal iliac artery

Table: 5.6 Comparison of Range and Mean Length of internal iliac artery of right and left, Males and Female

	Minimum (mm)	Maximum (mm)	Mean (mm)	Standard Deviation
Right	13.87	66.37	38.54	10.89
Left	11.21	65.62	37.79	11.77
Male	28.12	56.16	39.54	8.28
Female	11.21	66.37	37.08	13.14
Overall average	11.21	66.37	38.16	11.22

- There was no statistically significant difference in the dimensions above between the left and right sides of the pelvis (Table 5.6)

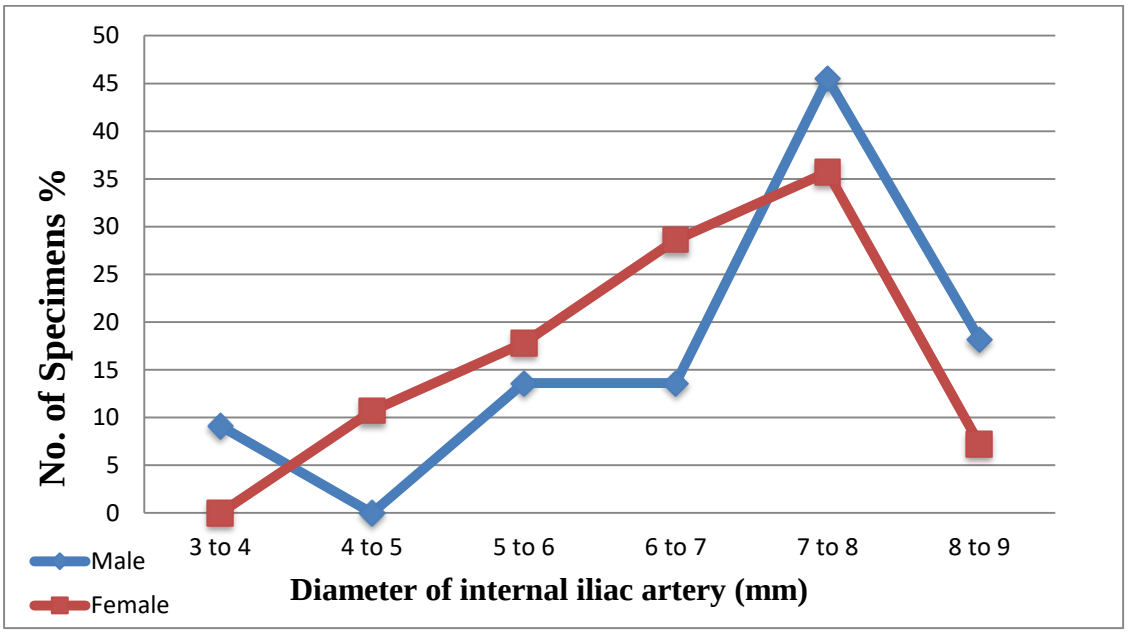
Figure 5.3: Left pelvic half shows the shortest length of the internal iliac artery (IIA), here it immediately divides into Anterior Division (AD) & Posterior Division (PD) EIA: External iliac artery.

5.5 DIAMETER OF INTERNAL ILIAC ARTERY

- The external diameter of internal iliac artery in males range from 3.63mm to 8.45mm (Figure 5.4) & in females it varies from 4.15mm to 8.27mm (Table 5.8)
- In majority of specimens (40%) the diameter of IIA ranged from 7 to 8 mm as shown in Table 5.7
- The mean diameter of 6.83 ± 1.24 mm was observed in this study.

Table: 5.7 Diameter of internal iliac artery

SNo.	Diameter of IIA (mm)	Male		Female		Total no. of Specimen	Percentage
		No.	%	No.	%		
1.	**3-4**	02	9.1	00	0	**02**	**4%**
2.	**4-5**	00	0	03	10.7	**03**	**6%**
3.	**5-6**	03	13.6	05	17.8	**08**	**16%**
4.	**6-7**	03	13.6	08	28.6	**11**	**22%**
5.	**7-8**	10	45.5	10	35.7	**20**	**40%**
6.	**8-9**	04	18.2	02	7.2	**06**	**12%**
	Total	**22**	**100**	**28**	**100**	**50**	**100%**



Graph 5.5 Frequency of Diameter of internal iliac artery

Table: 5.8 Comparison of minimum, maximum and average diameter of right and left, Males and Female internal iliac arteries

	Minimum (mm)	Maximum (mm)	Mean (mm)	Standard Deviation
Right	3.63	8.45	6.81	1.26
Left	3.97	8.39	6.85	1.25
Male	3.63	8.45	7.01	1.37
Female	4.15	8.27	6.69	1.13
Overall average	3.63	8.45	6.83	1.24

- It was observed that in female caliber were larger than males, which may be exists to accommodate the demands of the pelvic excavation of the female genital organs.
- There was no statistically significant difference in the dimensions above between the left and right sides of the pelvis (Table 5.8)

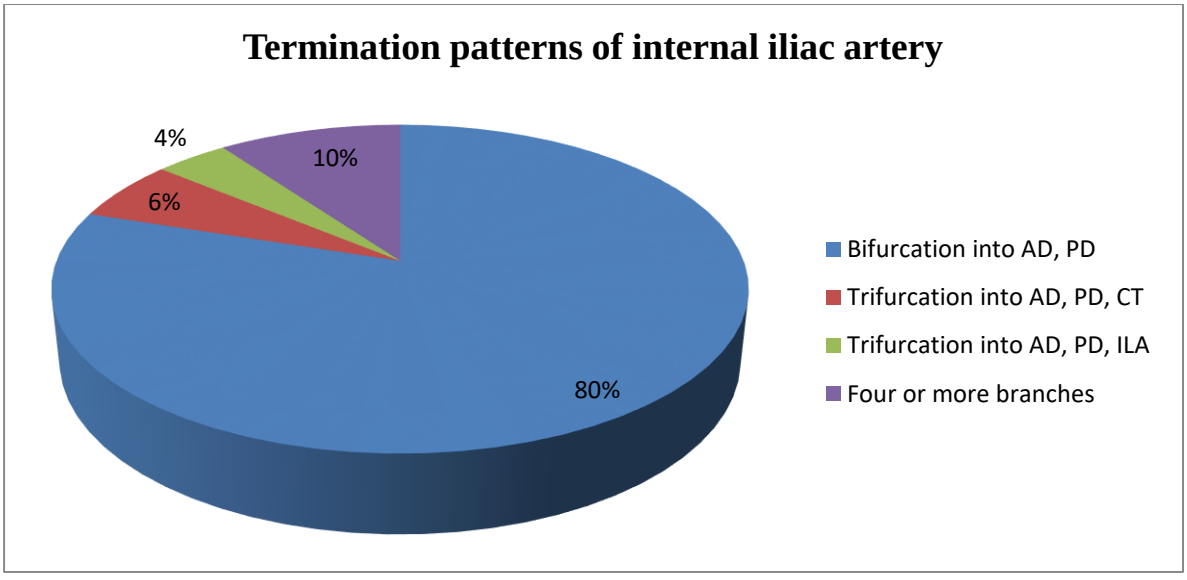
Figure 5.4: Right pelvic half shows the maximum values of External Diameter of the internal iliac artery.

5.6 TERMINATION PATTERNS OF INTERNAL ILIAC ARTERY

- In most of the Cases (80%) the internal iliac artery terminates by dividing into anterior and posterior trunks (Figure 5.5).
- In the present study other terminal branching patterns such as trifurcation and ramification into multiple branches were also found shown in Table 5.9

Table: 5.9 Various patterns of Termination of internal iliac artery

SNo.	Termination patterns	Frequency	Incidence (%)
1.	Bifurcation into anterior and posterior Division	40	80%
2.	Trifurcation into posterior division, Common Trunk of IGA & IPA and anterior division (Figure 5.6)	03	**6%**
3.	Trifurcation into iliolumbar, anterior & posterior division (Figure 5.7)	02	**4%**
4.	Ramifies into four or more branches (Figure 5.8)	05	**10%**
	Total	**50**	**100%**



Graph 5.6 Incidence of mode of termination of internal iliac artery

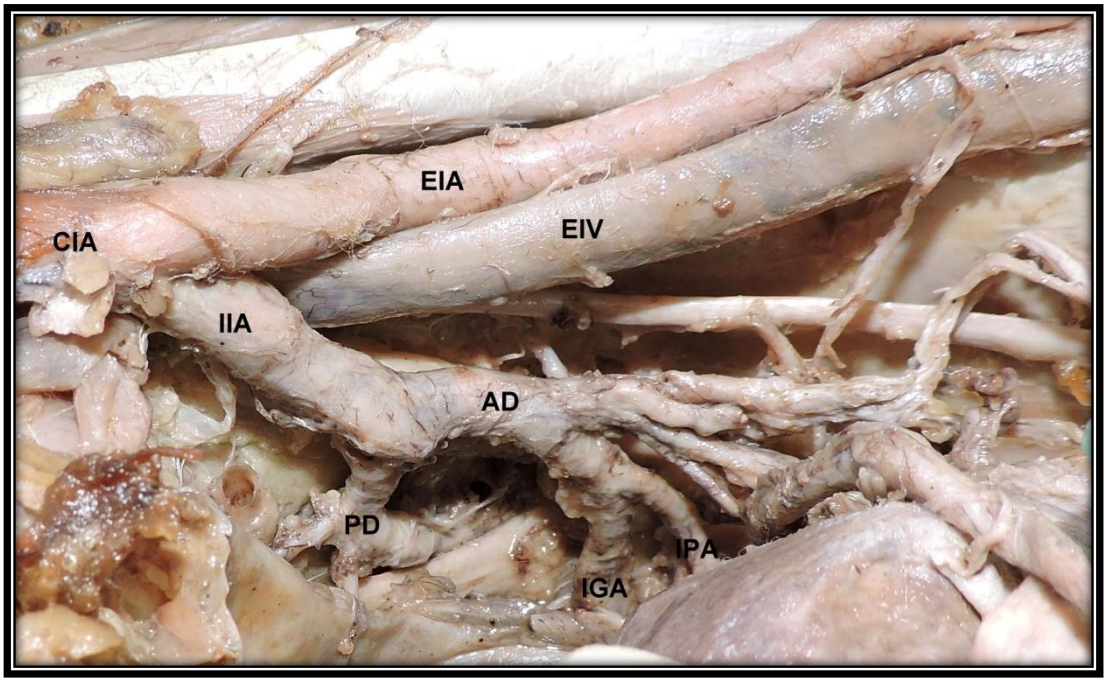


Figure 5.5: Left pelvic half shows bifurcation of internal iliac artery (IIA) into Anterior (AD) and Posterior division (PD). CIA: Common iliac artery; EIA: External iliac artery; IGA: inferior gluteal artery; IPA: internal pudendal artery.

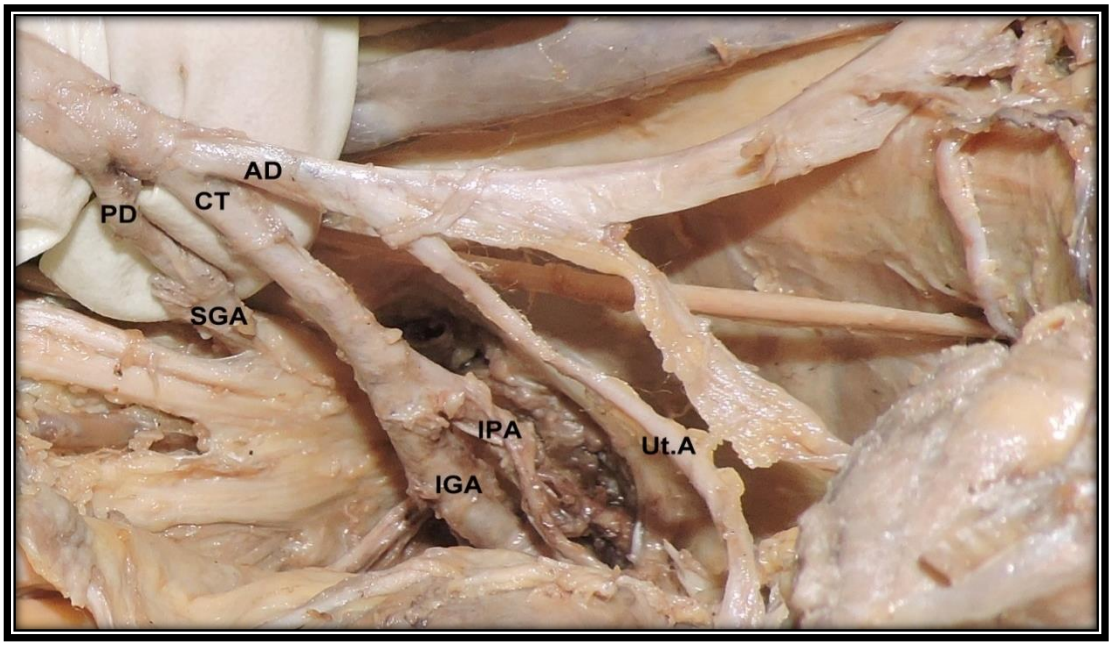


Figure 5.6: Left pelvic half shows trifurcation of internal iliac artery (IIA) into Posterior division (PD), Common Trunk (CT) of inferior gluteal artery (IGA) & internal pudendal artery (IPA) and Anterior division (AD). Ut.A: Uterine Artery.

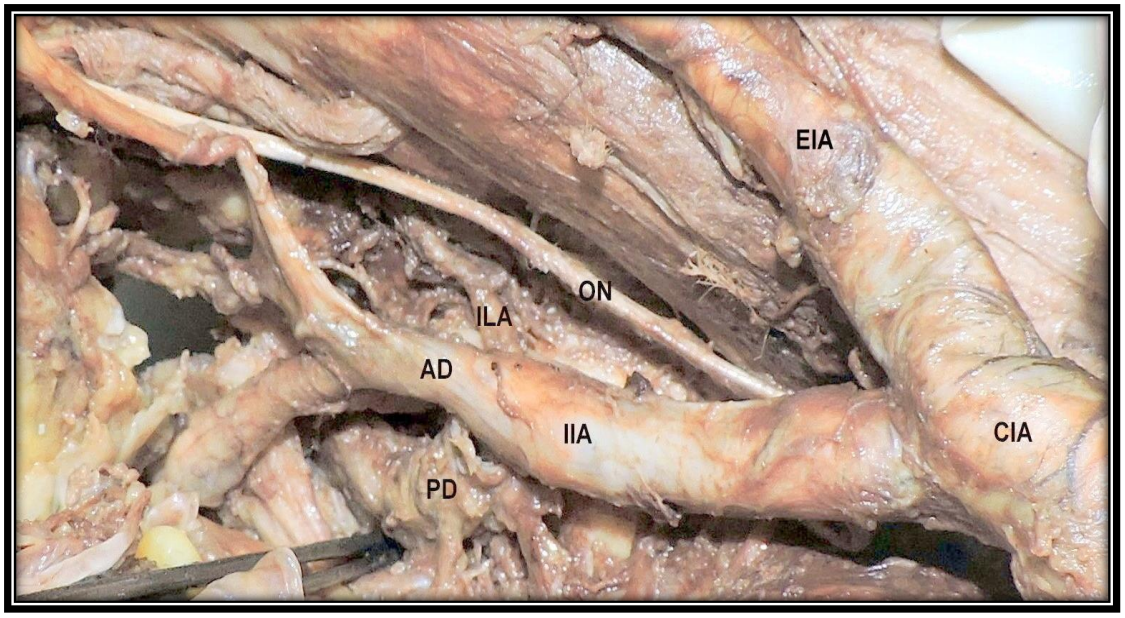


Figure 5.7: Right pelvic half shows trifurcation of internal iliac artery (IIA) into Iliolumbar Artery (ILA), Anterior division (AD) and Posterior division (PD). CIA: Common iliac artery; EIA: External iliac artery

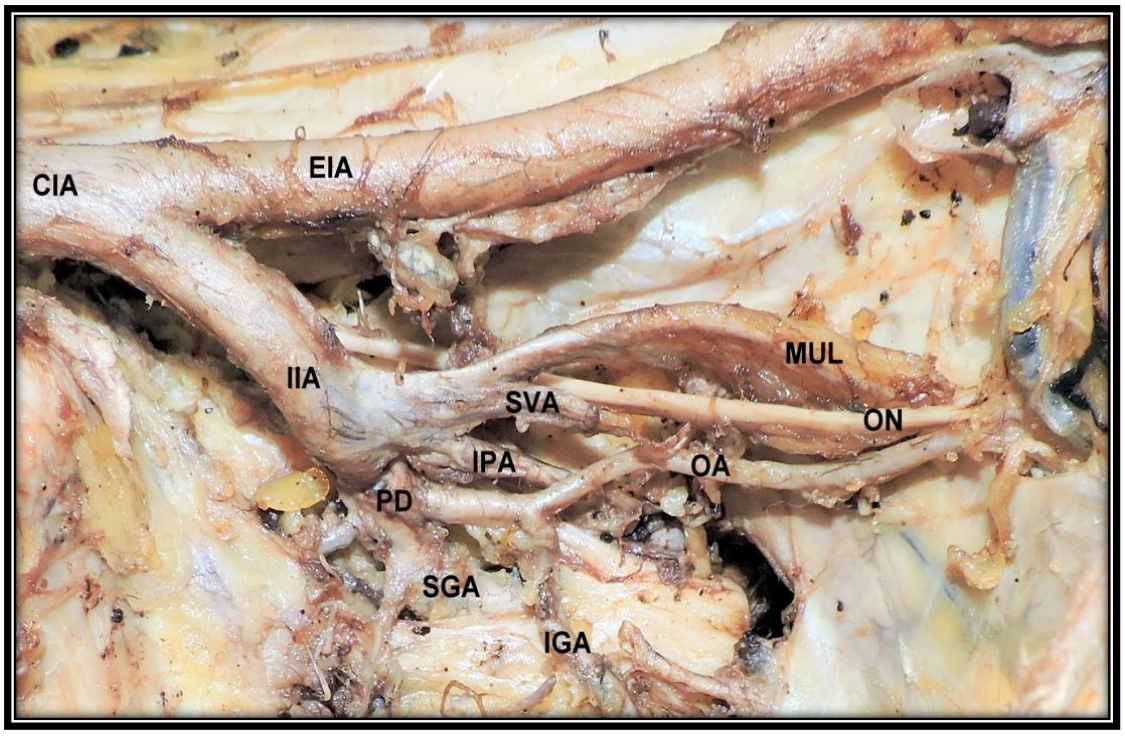


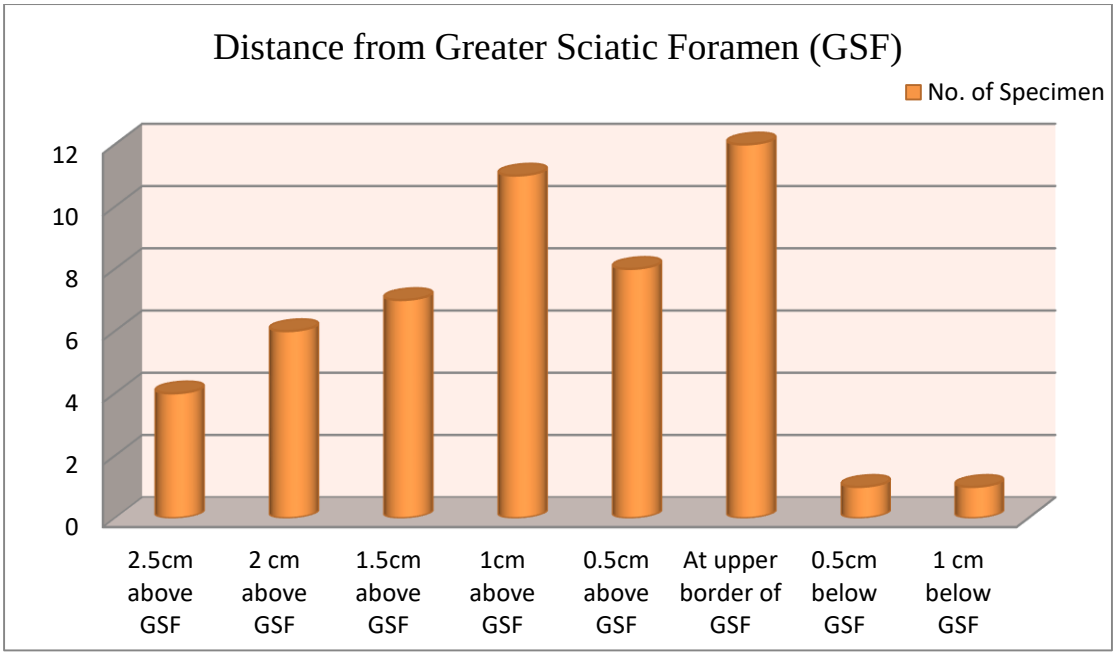
Figure 5.8: Left pelvic half shows many branches directly from main trunk of internal iliac artery (IIA) without dividing into two division. CIA: Common iliac artery; EIA: External iliac artery; SGA: Superior gluteal artery; IGA: inferior gluteal artery; IPA: internal pudendal artery; SVA: Superior Vesical artery, OA: Obturator artery; MUL: Medial Umbilical Ligament.

5.7 LEVEL OF DIVISION OF INTERNAL ILIAC ARTERY IN RESPECT TO GREATER SCIATIC FORAMEN (GSF)

- In the current study cases were observed in which internal iliac artery terminates 2.5 – 2.0 cm proximal as well as 1cm distal to superior border of Greater Sciatic Foramen.
- In 72% cases the level of termination of internal iliac artery was above the Greater Sciatic Foramen. (Table 5.10)
- Figure 5.10 shows the distance from point of division of internal iliac artery to upper border of Greater Sciatic Foramen (GSF).

Table: 5.10 Variations in the level of division of internal iliac artery

SNo.	Distance from Greater Sciatic Foramen (GSF)	No. of Specimen	Percentage
1.	2.5cm above GSF	04	8%
2.	2 cm above GSF	06	12%
3.	1.5cm above GSF	07	14%
4.	1cm above GSF	11	22%
5.	0.5cm above GSF	08	16%
6.	At upper border of GSF	12	24%
7.	0.5cm below GSF	01	2%
8.	1 cm below GSF	01	2%
	Total	50	100%



Graph 5.7 Variations in the level of division of internal iliac artery

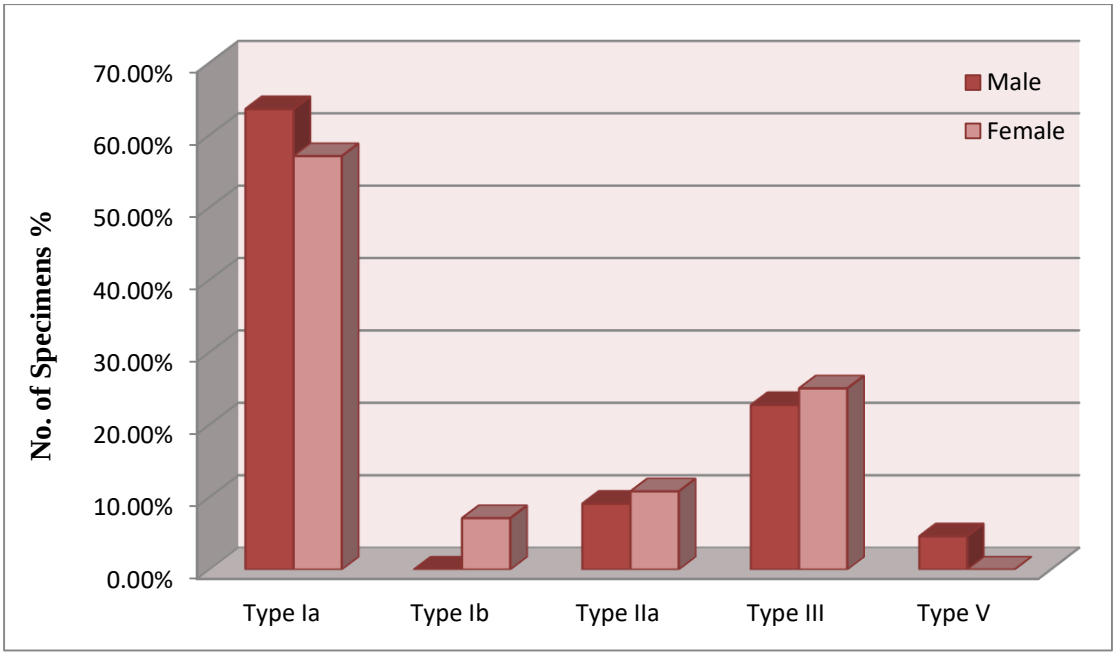
Figure 5.9 shows the distance from point of division of internal iliac artery to upper border of Greater Sciatic Foramen (GSF) in left pelvic half. EIA: External iliac artery; IIA: internal iliac artery; AD: Anterior Division; PD: Posterior Division.

5.8 TYPE OF BRANCHING PATTERN OF INTERNAL ILIAC ARTERY ACCORDING TO ADACHI'S CLASSIFICATION

- Our study revealed the predominance of type Ia pattern of internal iliac artery in both male & female. (Table:5.11)
- Only in a single male cadaver Type V branching pattern was observed on right side (Figure 5.14)
- No case of Type IIb & Type IV of Adachi's classification found in our study.

Table: 5.11 According to Adachi Classification of branching patterns of internal iliac artery

SNo.	Types	Male		Female		Total	
		No.	%	No.	%	No.	%
1.	Ia	14	63.6%	16	57.1%	30	60%
2.	Ib	00	0	02	7.1%	02	4%
3.	IIa	02	9.1%	03	10.8%	05	10%
4.	III	05	22.7%	07	25%	12	24%
5.	V	01	4.6%	00	0	01	2%
	Total	22	100%	28	100%	50	100%



Graph 5.8 Frequencies of different branching patterns of internal iliac artery

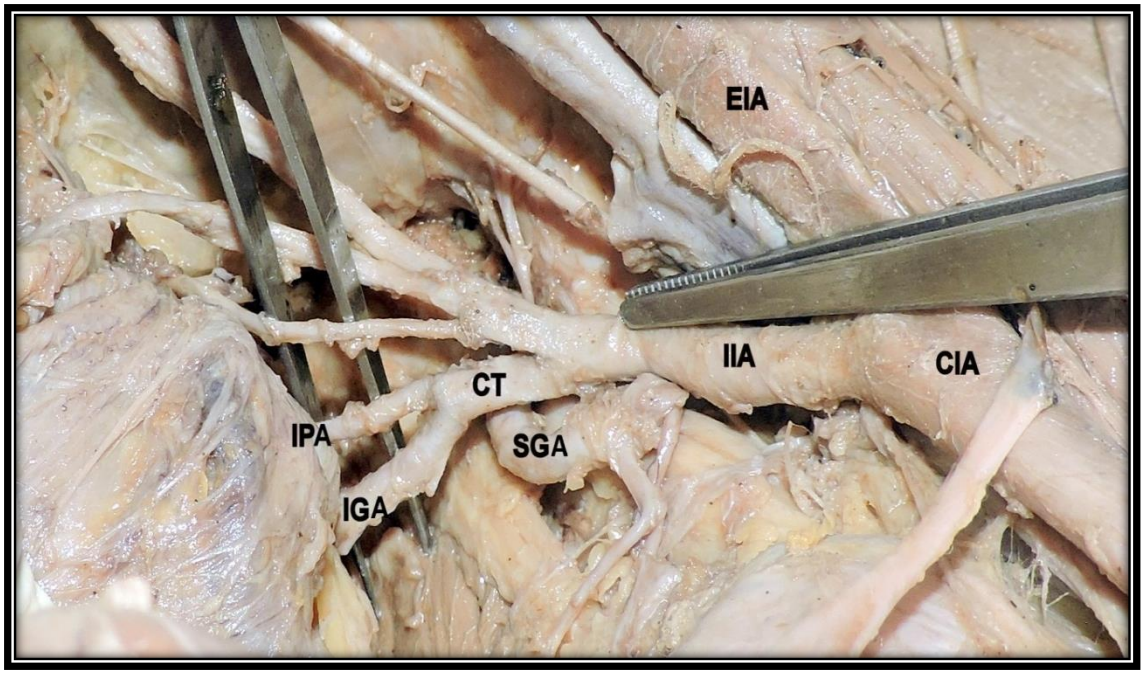


Figure 5.10: Right pelvic half shows type Ia Adachi's classification—Superior gluteal artery (SGA) arises separately from internal iliac artery and a common trunk (CT) for Inferior gluteal artery (IGA) and Internal pudendal artery (IPA) divides proximal to the pelvic floor. IIA: internal iliac artery

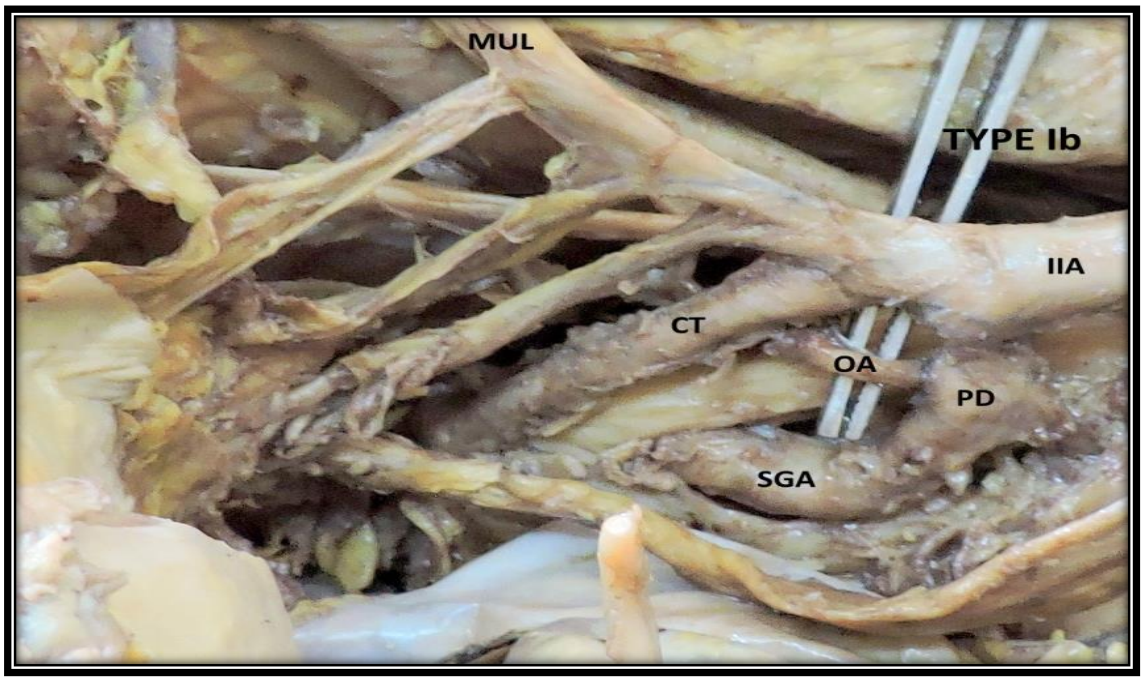


Figure 5.11: Right pelvic half shows type Ib Adachi's classification—Superior gluteal artery (SGA) arises separately from internal iliac artery (IIA) and a common trunk (CT) for Inferior gluteal artery (IGA) and Internal pudendal artery (IPA) divides outside the pelvis, below pelvic floor. OA: Obturator artery

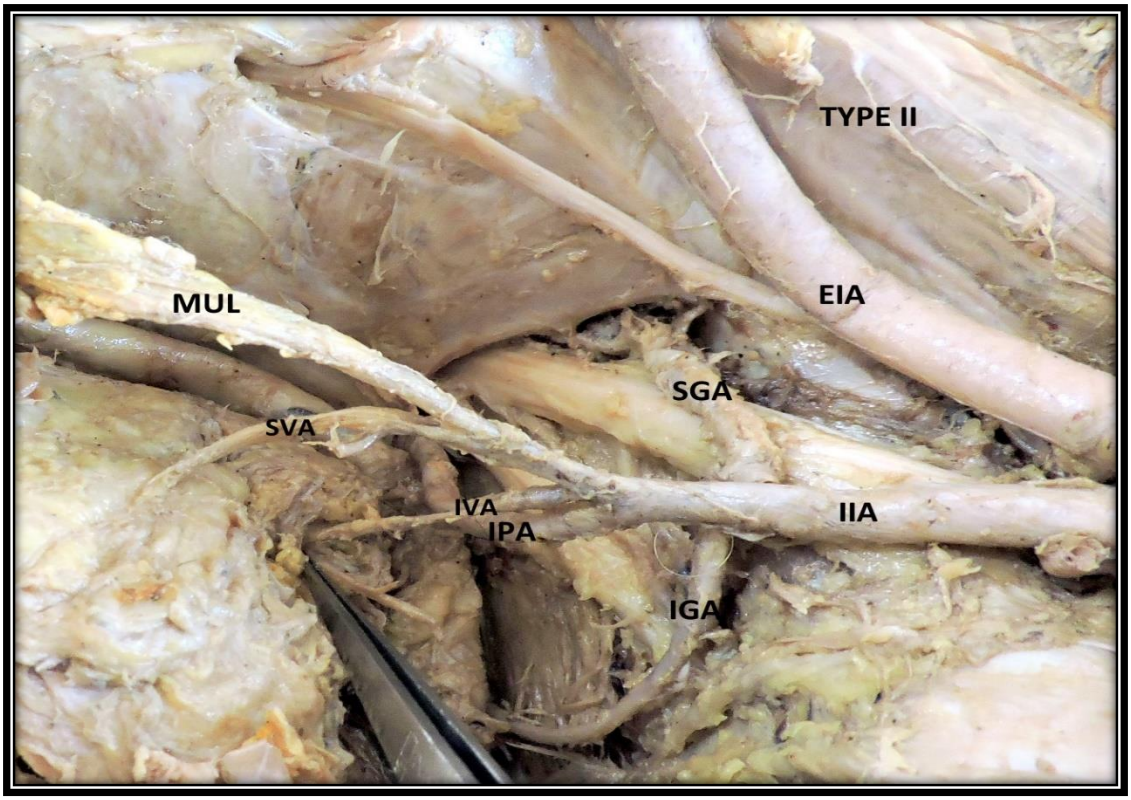


Figure 5.12: Right pelvic half shows type II Adachi's classification- The superior (SGA) and inferior gluteal (IGA) arteries arose from a common trunk whereas the internal pudendal artery (IPA) arose independently.

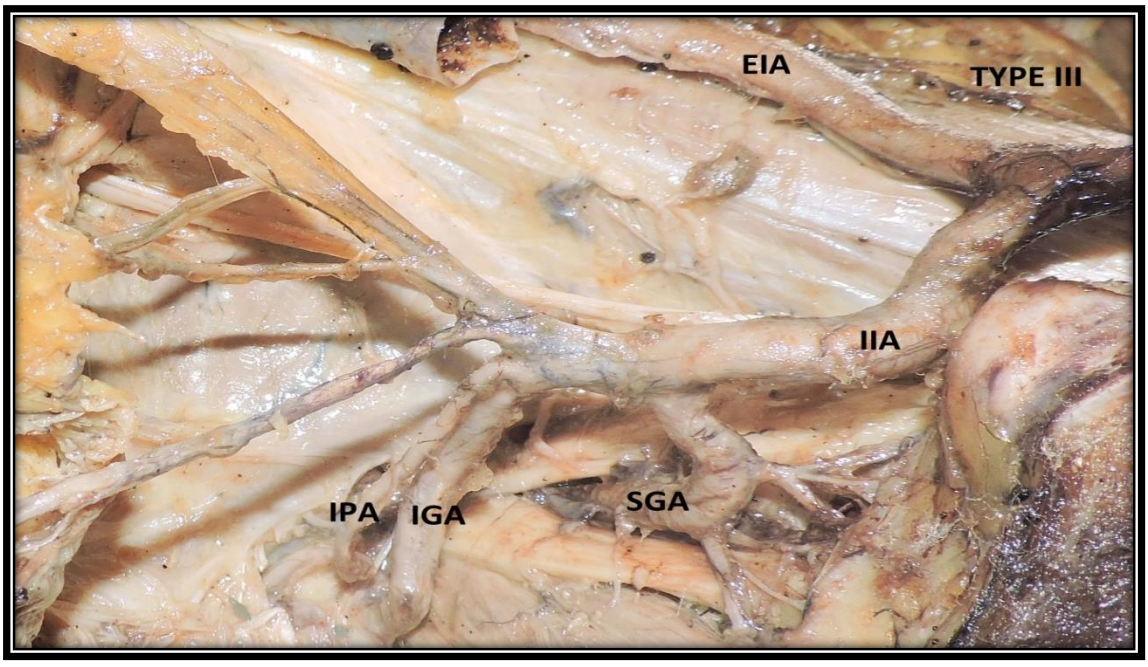


Figure 5.13: Right pelvic half shows type III Adachi's classification - the three branches, namely, Inferior gluteal (IGA), Superior gluteal (SGA), and Internal pudendal artery (IPA), arise separately from the internal iliac artery (IIA); EIA: external iliac artery.

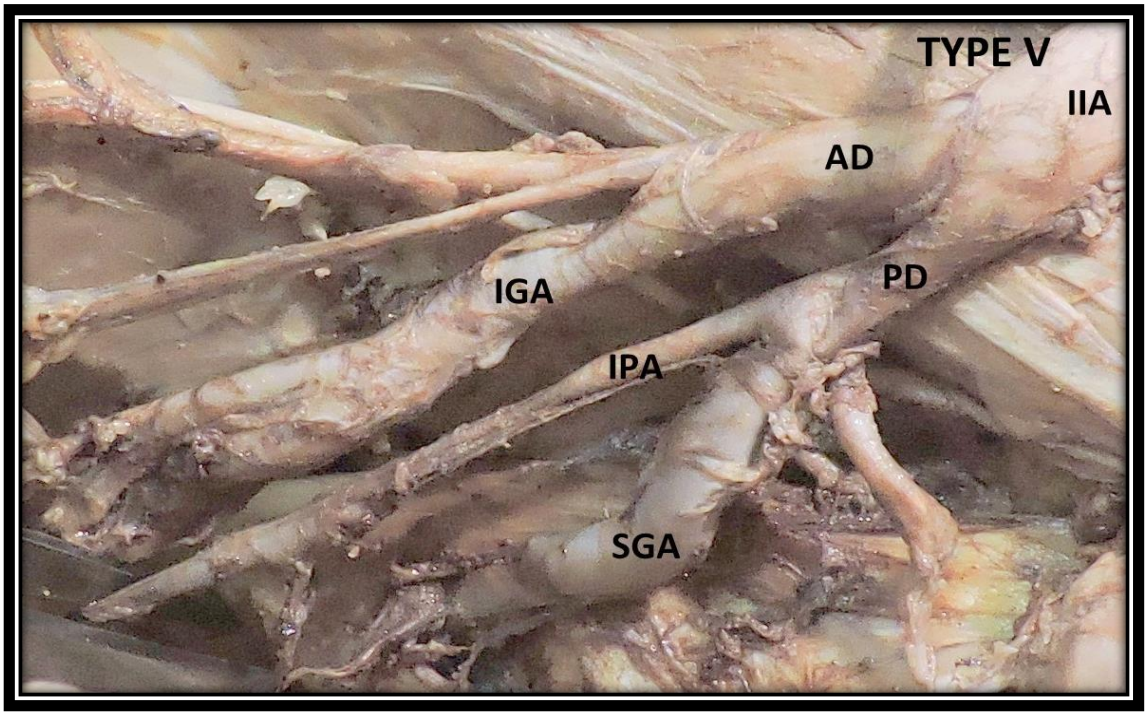


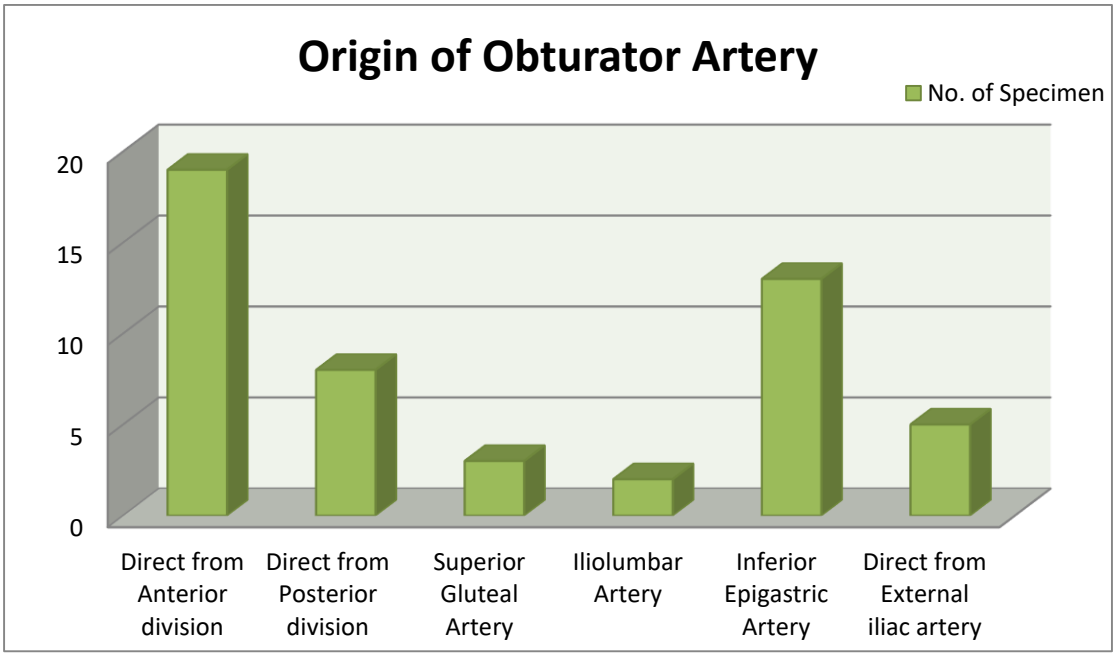
Figure 5.14: Right pelvic half shows type V Adachi's classification - The internal iliac artery (IIA) trunk gives the Internal pudendal (IPA), and Superior gluteal arteries (SGA) from a common trunk whereas the Inferior gluteal (IGA) has a separate origin

5.9 ORIGIN OF OBTURATOR ARTERY

- The present study shows that the origin of the obturator artery was highly variable.
- Out of 50 pelvic halves studied, 31 pelvises (62%) showed variations.
- The obturator artery took origin from various sources as shown in Table:5.12

Table: 5.12 Frequencies of different origin of Obturator artery

SNo.	Origin Of Obturator Artery	No. of Specimen	Percentage
1.	Direct from Anterior division of the internal iliac artery (Figure 5.15)	**19**	**38%**
2.	Direct from Posterior division of the internal iliac artery (Figure 5.11, 5.16)	**08**	**16%**
3.	Superior Gluteal Artery	**03**	**6%**
4.	Common trunk with Iliolumbar Artery (Figure 5.17)	**02**	**4%**
5.	Inferior Epigastric Artery (Figure 5.18)	**13**	**26%**
6.	Direct from External iliac artery	**05**	**10%**
	Total	**50**	**100%**



Graph 5.9 Different modes of origin of Obturator artery

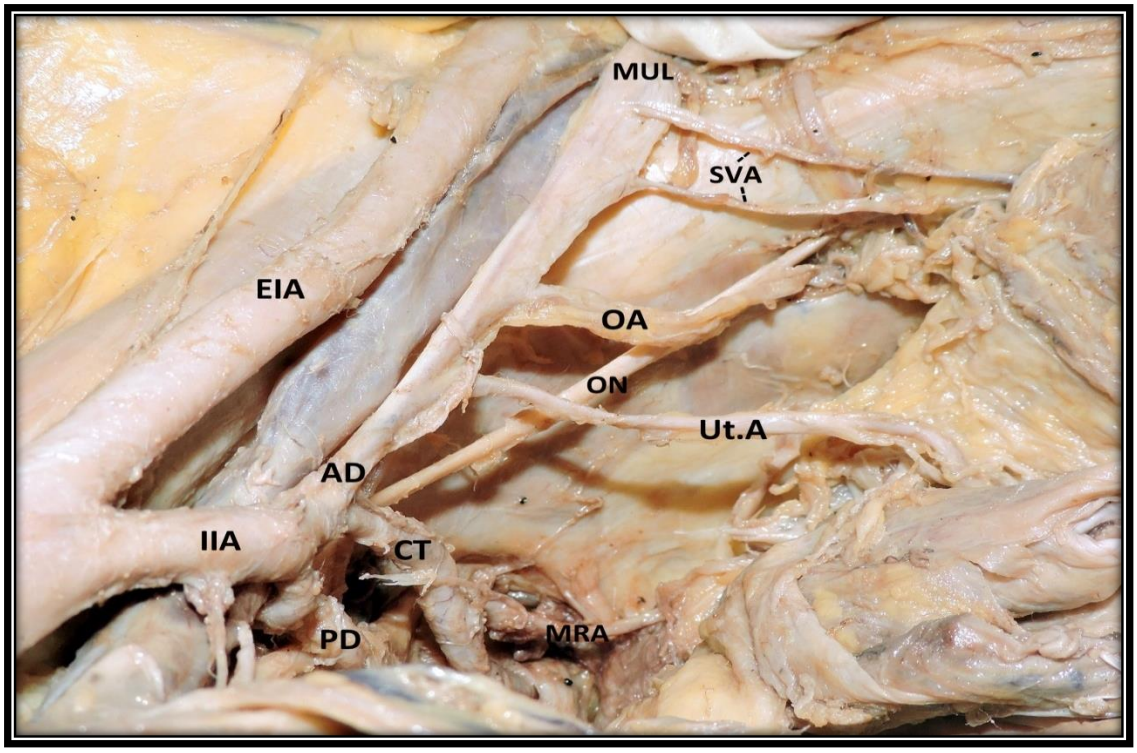


Figure 5.15: Left pelvic half shows origin of Obturator artery (OA) direct from Anterior Division (AD) of the internal iliac artery (IIA); PD: Posterior Division; SVA: Superior vesical artery; EIA: external Iliac artery; Ut.A: Uterine Artery; MRA: Middle Rectal Artery; MUL: Medial Longitudinal Ligament; ON: Obturator nerve

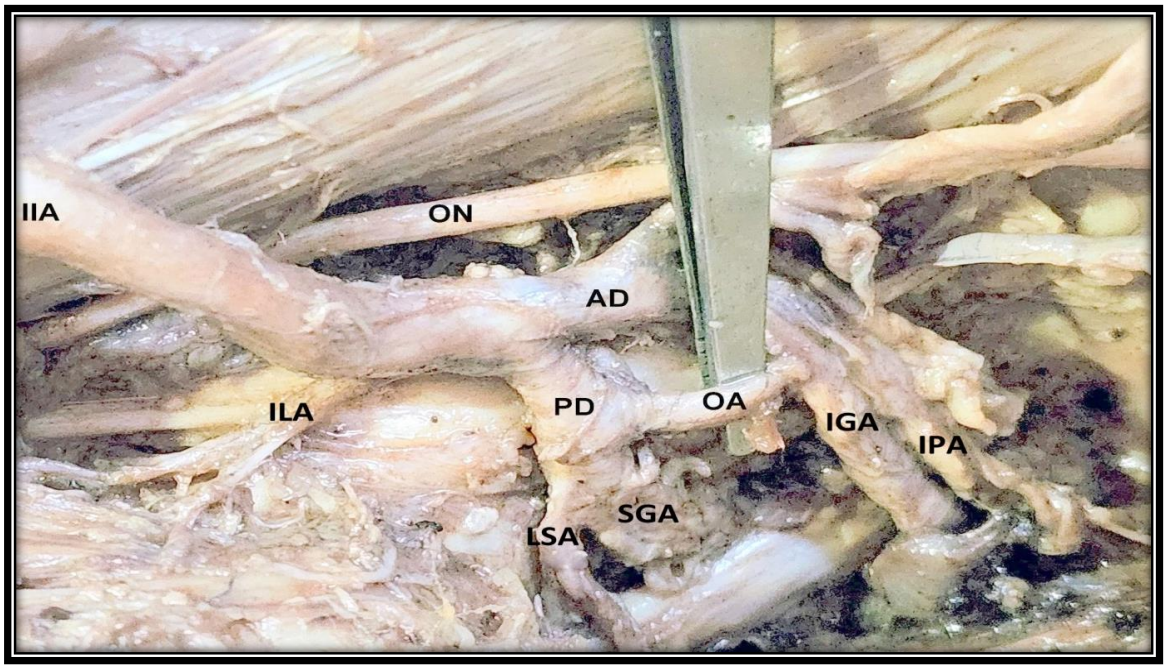


Figure 5.16: Left pelvic half shows origin of Obturator artery (OA) direct from Posterior division (PD) of the internal iliac artery (IIA); AD: Anterior Division; SGA: Superior gluteal artery; LSA: Lateral sacral artery; ON: Obturator nerve.

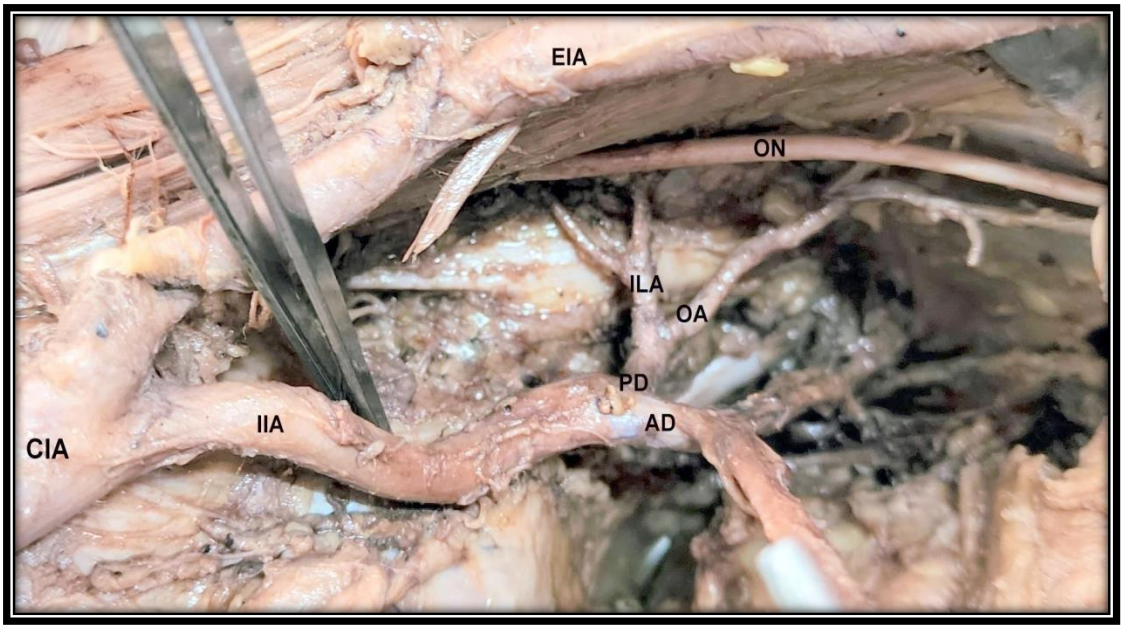


Figure 5.17: Left pelvic half shows the origin of Obturator artery (OA) from a common trunk with Iliolumbar artery (ILA). IIA: internal iliac artery; EIA: external iliac artery; ON: Obturator nerve

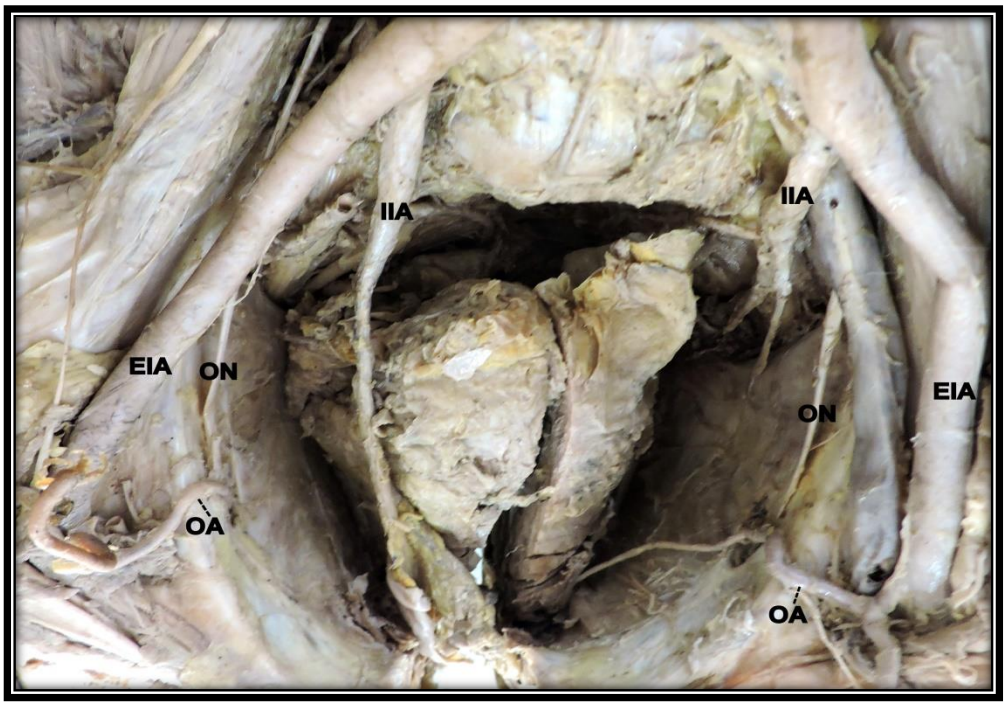


Figure 5.18: Both sides of Male cadaver show origin of Obturator artery (OA) from Inferior Epigastric Artery from External Iliac artery (EIA), ON: Obturator nerve.

- Bilateral Asymmetry was also observed in the origin of Obturator artery in few cases as shown in Figure 5.19 & 5.20
- Both figures are of same cadaver, left side shows origin from posterior division of the internal iliac artery while right side shows origin from External iliac artery.

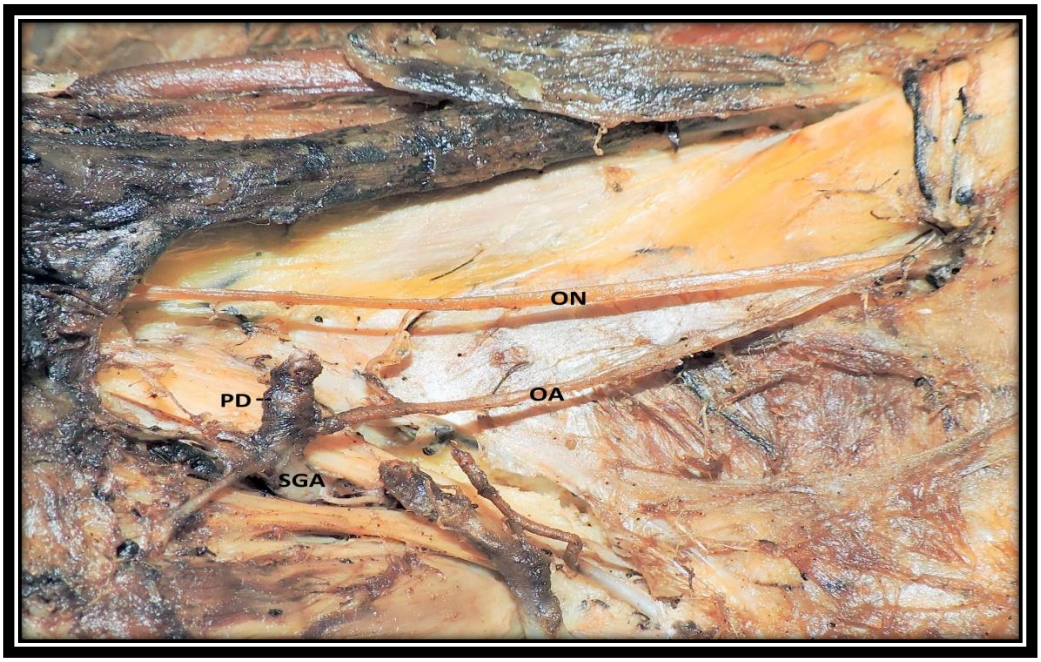


Figure 5.19: Left pelvic half shows origin of Obturator artery (OA) direct from Posterior division (PD) of the internal iliac artery (IIA)

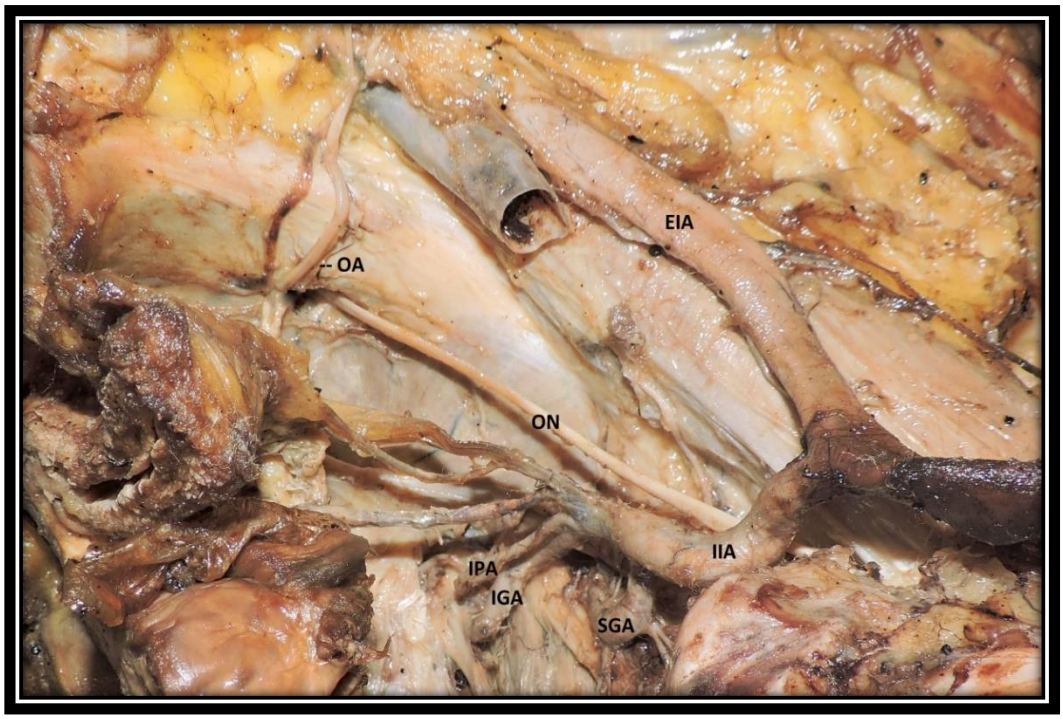


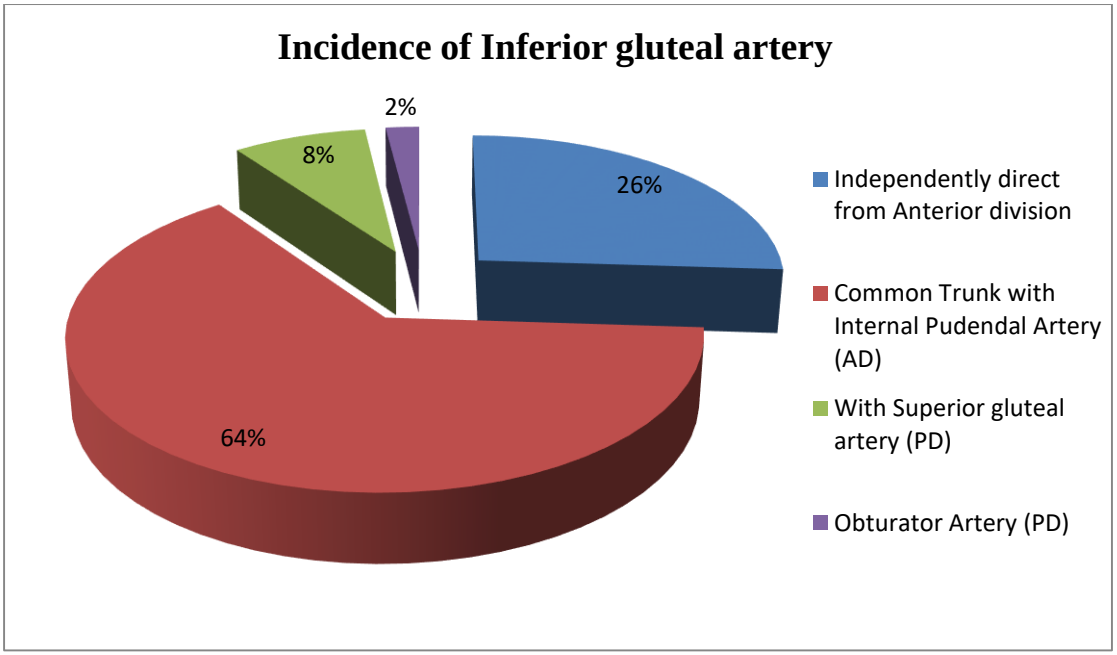
Figure 5.20: Right pelvic half shows origin of Obturator artery (OA) from External iliac artery (EIA)

5.10 ORIGIN OF INFERIOR GLUTEAL ARTERY

- In present study origin of Inferior gluteal artery was from anterior division in majority of cases (90%) which is either independently from anterior division as depicted in Figure 5.13,5.14 or through a common trunk with Internal Pudendal artery as present in Figure 5.5,5.6,5.10 .
- In 8% cases of present study inferior gluteal artery arise from a gluteal common trunk with superior gluteal artery from Posterior division (Figure:5.12)
- In a single case inferior gluteal artery arise from Obturator Artery which was arising from Posterior division of the internal iliac artery as illustrated in Figure 5.21.

Table 5.13: Different modes of origin of Inferior gluteal artery

SNo.	Origin of Inferior gluteal artery		Frequency	Incidence (%)
1.	**Anterior division of the internal iliac artery**	Independently direct from Anterior division.	13	26%
2.		Common Trunk with Internal Pudendal Artery	32	64%
3.	**Posterior division of the internal iliac artery**	With Superior gluteal artery	04	8%
4.		Obturator Artery (Arising from PD)	01	2%
	Total		**50**	**100%**



Graph 5.10 Different modes of origin of Inferior gluteal artery

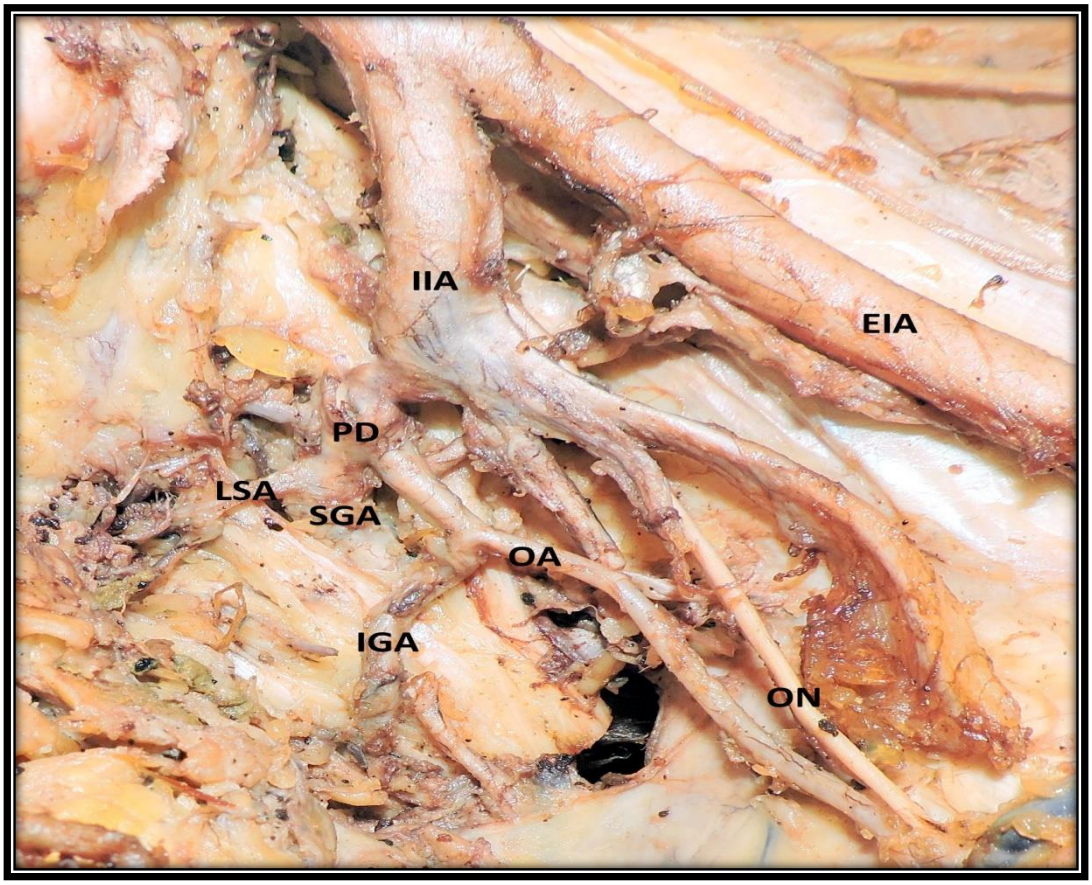


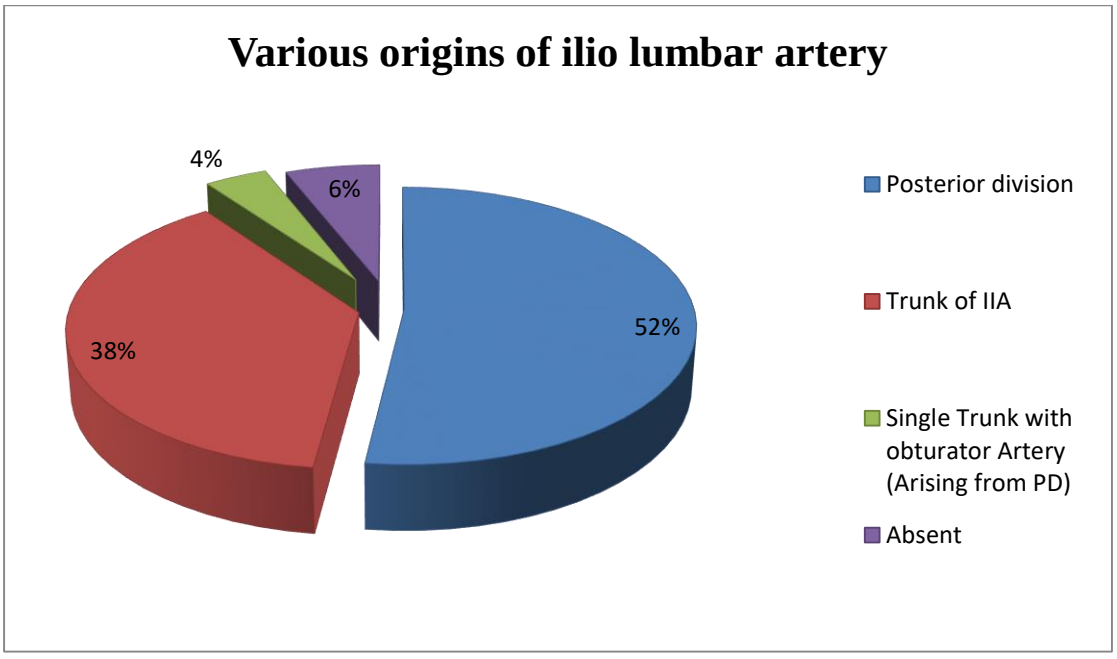
Figure 5.21: Left pelvic half shows origin of Inferior gluteal artery (IGA) from Obturator artery (OA) which is arising from posterior division (PD) of the internal iliac artery (IIA). EIA: External iliac artery; SGA: Superior gluteal artery; LSA: Lateral sacral artery; ON: Obturator nerve.

5.11 ORIGIN OF ILIOLUMBAR ARTERY

- The origin of the iliolumbar artery observed in our study, was grouped into 3 different categories.
- In majority of specimen 52% the site of origin of the iliolumbar artery was as a separate branch from the Posterior division.
- Variations in the iliolumbar artery's origin was observed in 24 out of 50 (48%) specimen as given in Table 5.14.

Table 5.14 Incidence of variation in the origin of the Iliolumbar artery.

S. No	Origin of Iliolumbar Artery	No. of Specimen	Percentage
1	Posterior division proper	26	52%
2	Trunk of IIA	19	38%
3	Single Trunk with obturator Artery (Arising from posterior division)	2	4%
4	Absent	3	6%
	Total	**50**	**100%**



Graph 5.11 Incidence of variations in the origin of the iliolumbar artery

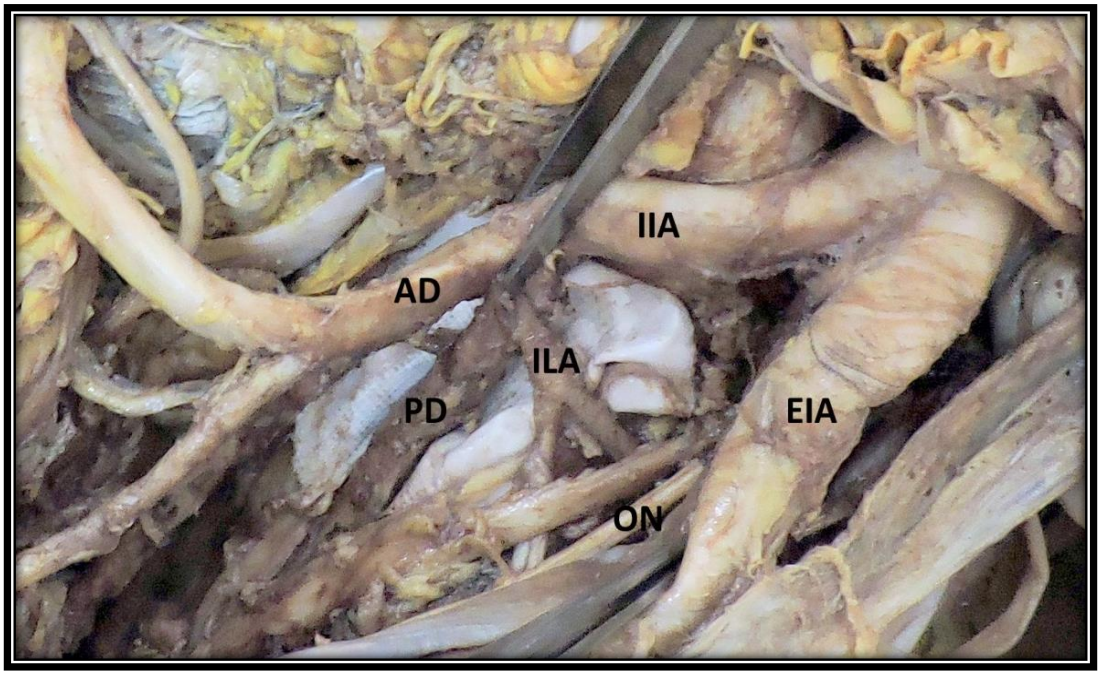


Figure 5.22: Left pelvic half shows the origin of the Iliolumbar artery (ILA) from the Posterior division (PD) of the Internal iliac Artery (IIA). EIA: External iliac artery; AD: Anterior Division; ON: Obturator nerve.

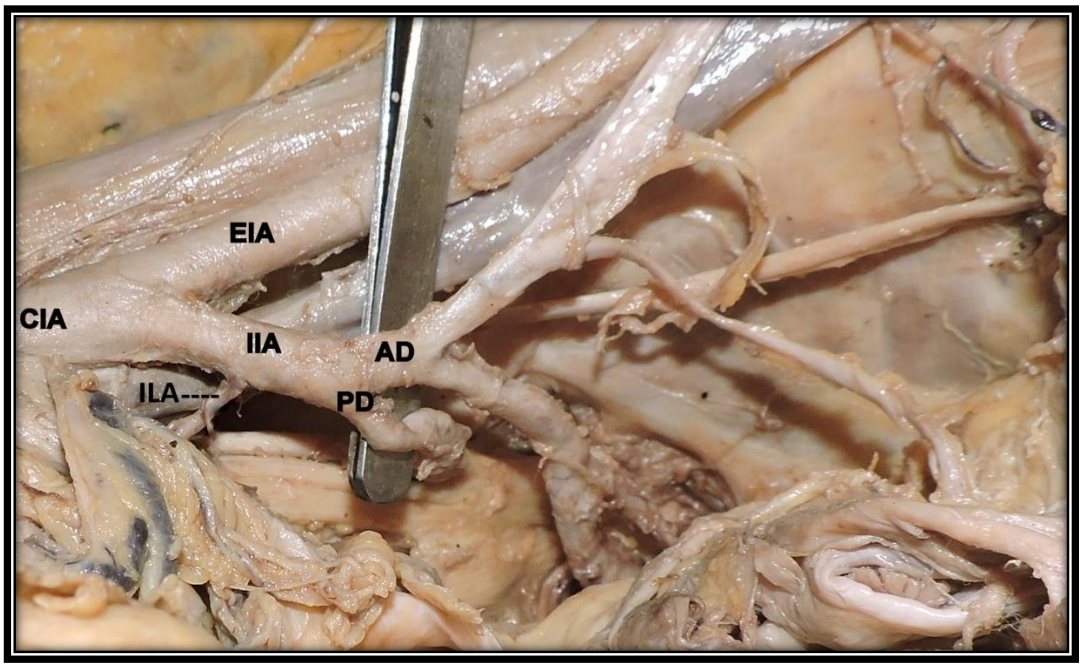
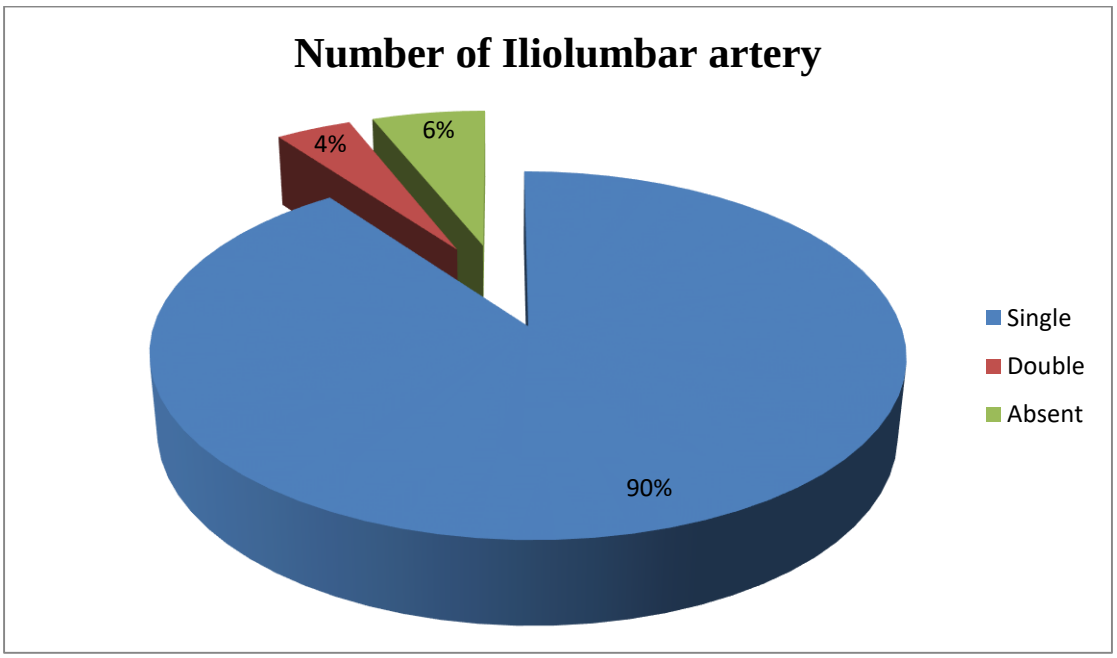


Figure 5.23: Left pelvic half shows the origin of the Iliolumbar artery (ILA) from the trunk of the Internal iliac Artery (IIA). CIA: Common iliac artery; EIA: External iliac artery; AD: Anterior Division; PD: Posterior division.

- Current study also shows the number of iliolumbar arteries present in the hemi pelvis in Table 5.15
- Iliolumbar artery is present as a single branch in 45 out of 50 (90%) specimen
- In a single cadaver on both sides there were double origins of the Iliolumbar artery from two different points, one direct from the trunk of the internal iliac artery & other from the Posterior division of the internal iliac artery as depicted in Figure 5.24
- Iliolumbar artery was found absent in 3 specimens (6%) as shown in Table below.

Table 5.15 Number of Iliolumbar artery present in the pelvic half

S. No.	Number	Frequency	Incidence (%)
1	Single	45	90 %
2	Double	2	4 %
3	Absent	3	6 %
	Total	50	100%



Graph 5.12 Number of Iliolumbar artery present in the Hemi-pelvis

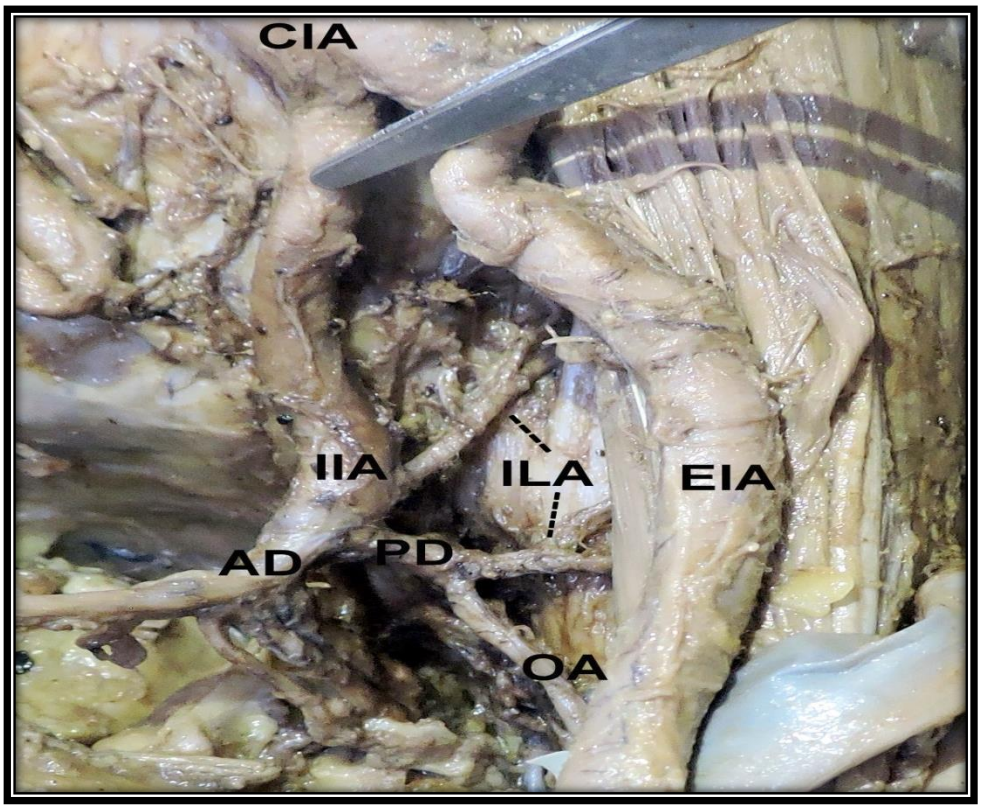


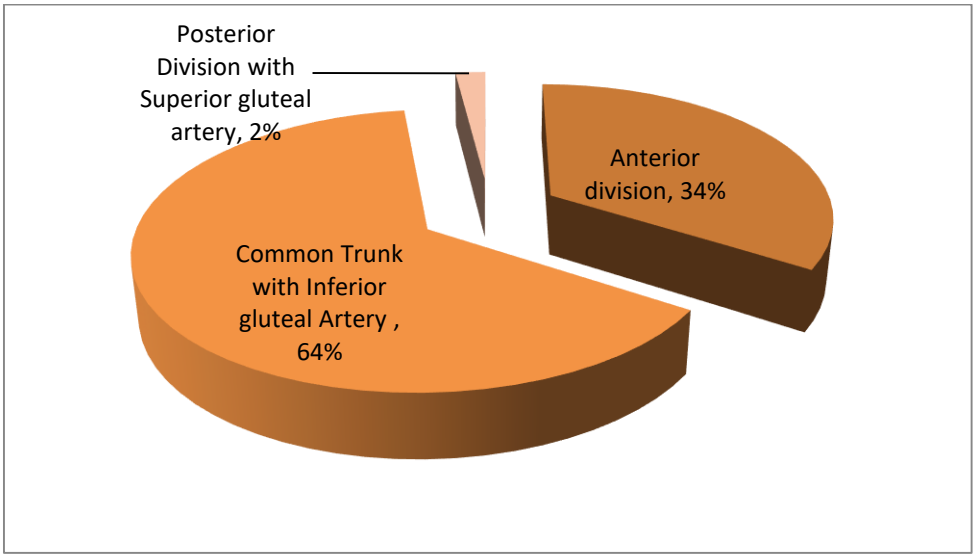
Figure 5.24: Left pelvic half shows the double origin of the Iliolumbar artery (ILA), one direct from the trunk of the internal iliac Artery (IIA) & other from the Posterior division (PD) of the internal iliac artery. CIA: Common iliac artery; EIA: External iliac artery; AD: Anterior Division; OA: Obturator artery.

5.12 ORIGIN OF INTERNAL PUDENDAL ARTERY

- In majority of cases (64%) Internal Pudendal artery arises through a common trunk with Inferior gluteal artery which corresponds with Type 1 Adachi classification of branching pattern of internal iliac artery as illustrated in Figure 5.5, 5.6, 5.10.
- Internal Pudendal artery arises from anterior division independently in 34% specimen which includes both Type II & Type III of branching pattern of Adachi classification as depicted in Figure 5.13.
- On very rare instance the internal pudendal and superior gluteal arteries from a common trunk (Type V of Adachi classification) which was found in 2% cases of our study as shown in Figure 5.14.

Table 5.16 Various origins of the Internal Pudendal artery

S. No	Origin of Internal Pudendal artery	No. of Specimen	Percentage
1	Independently direct from anterior division.	17	34%
2	Common Trunk with Inferior gluteal Artery	32	64%
3	Posterior Division with Superior gluteal artery	1	2%
	Total	**50**	**100%**



Graph 5.13 Different modes of origin of Inferior gluteal artery

5.13 ORIGIN OF SUPERIOR VESICAL ARTERY

- In a male cadaver on the left side the superior vesical artery arises from obturator artery which was also having an aberrant course & origin from external iliac artery instead of internal iliac artery as illustrated in Figure 5.25.
- While on the right side of same cadaver the superior vesical artery arises from usual anterior division of internal iliac artery.
- In the present study a single such case was observed among 50 pelvic halves.

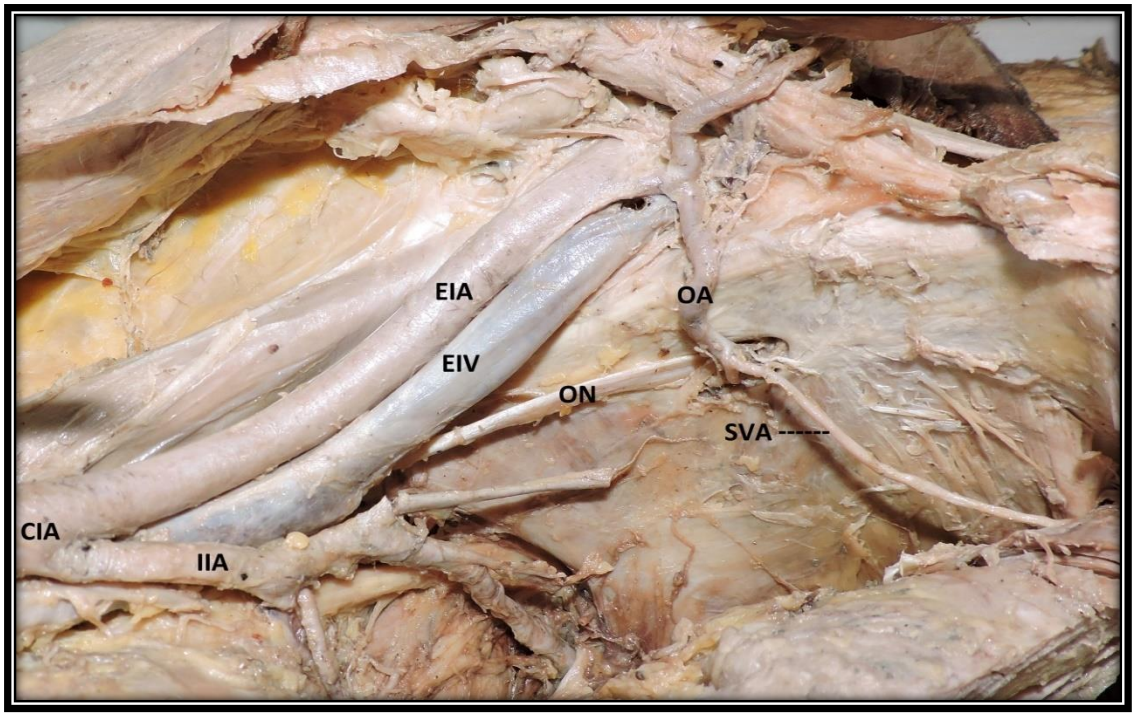
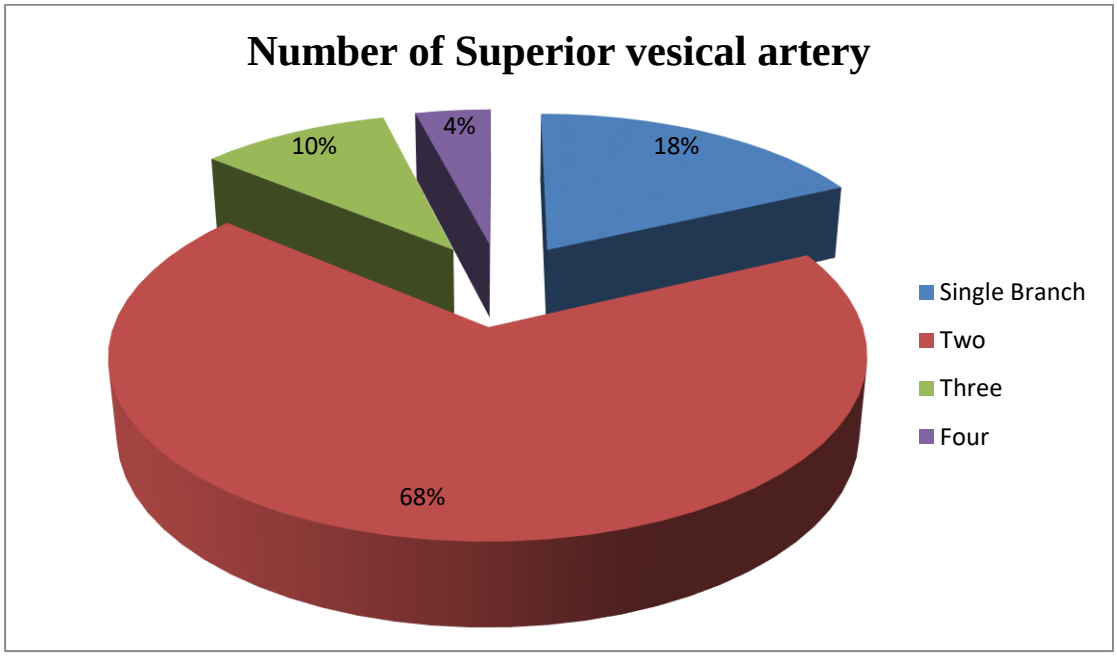


Figure 5.25: Left pelvic half shows the origin of the superior vesical artery (SVA) from obturator artery (OA) which was arising from External iliac artery (EIA). IIA: internal iliac artery; CIA: Common iliac artery; EIV: External iliac vein; ON: Obturator nerve

- In our study superior vesical artery arises as a single branch as well as multiple branches from anterior division of internal iliac artery.
- In most of the cases 68 % superior vesical artery arises as a two branches from internal iliac artery as depicted in Figure 5.26, 5.15.

Table 5.17 Number of Superior vesical artery arising from internal iliac artery

S. No.	Number of SVA	Frequency	Incidence (%)
1	Single Branch	9	18 %
2	Two	34	68 %
3	Three	5	10 %
4	Four	2	4 %
	Total	50	100%



Graph 5.14 Number of Superior vesical artery

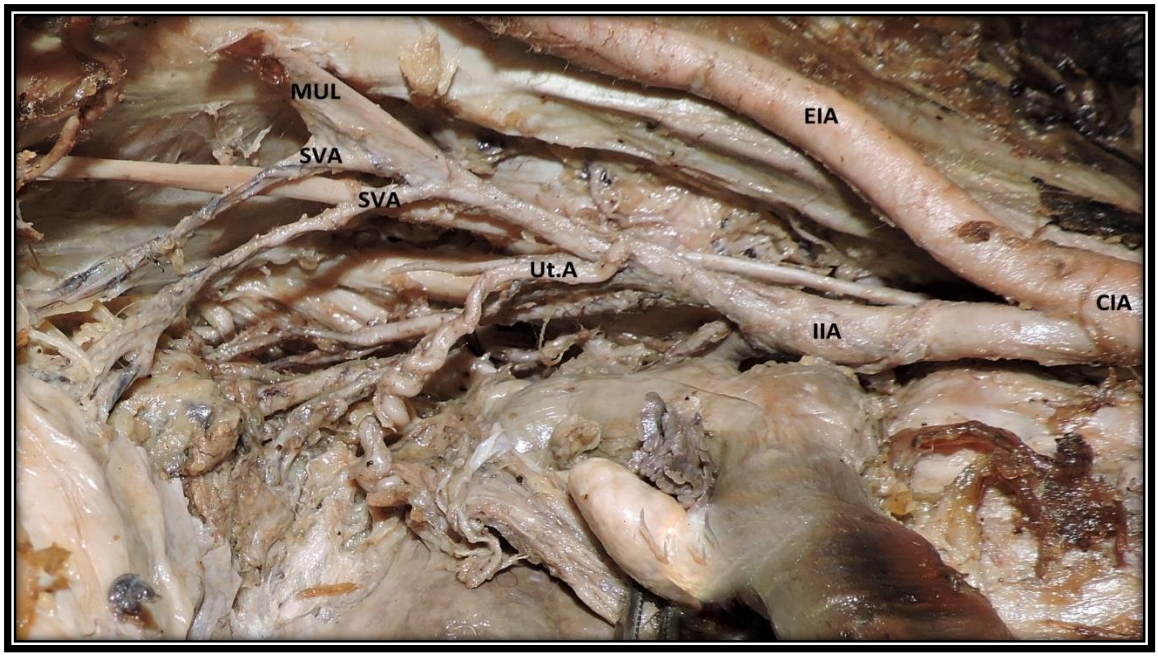


Figure 5.26: Right pelvic half shows the superior vesical artery (SVA) arises as a two branches from internal iliac Artery (IIA). CIA: Common iliac artery; EIA: External iliac artery; Ut.A: Uterine Artery

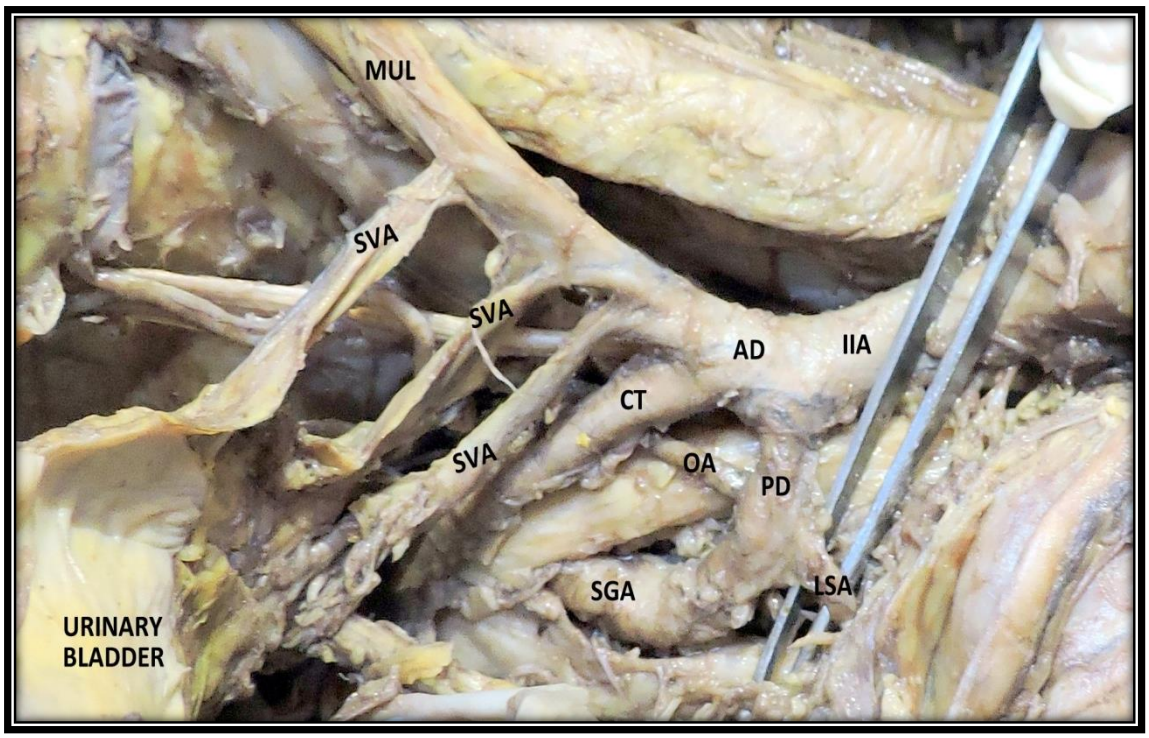


Figure 5.27: Right pelvic half shows the superior vesical artery (SVA) arises as a three branches from anterior division (AD) of internal iliac Artery (IIA). CT: Common trunk; OA: Obturator artery; SGA: Superior gluteal artery

5.14 ORIGIN OF MIDDLE RECTAL ARTERY

- In our study Middle rectal artery was found arising from a common trunk with internal pudendal artery & inferior gluteal artery from anterior division of internal iliac artery as depicted in Figure 5.28, 5.15.

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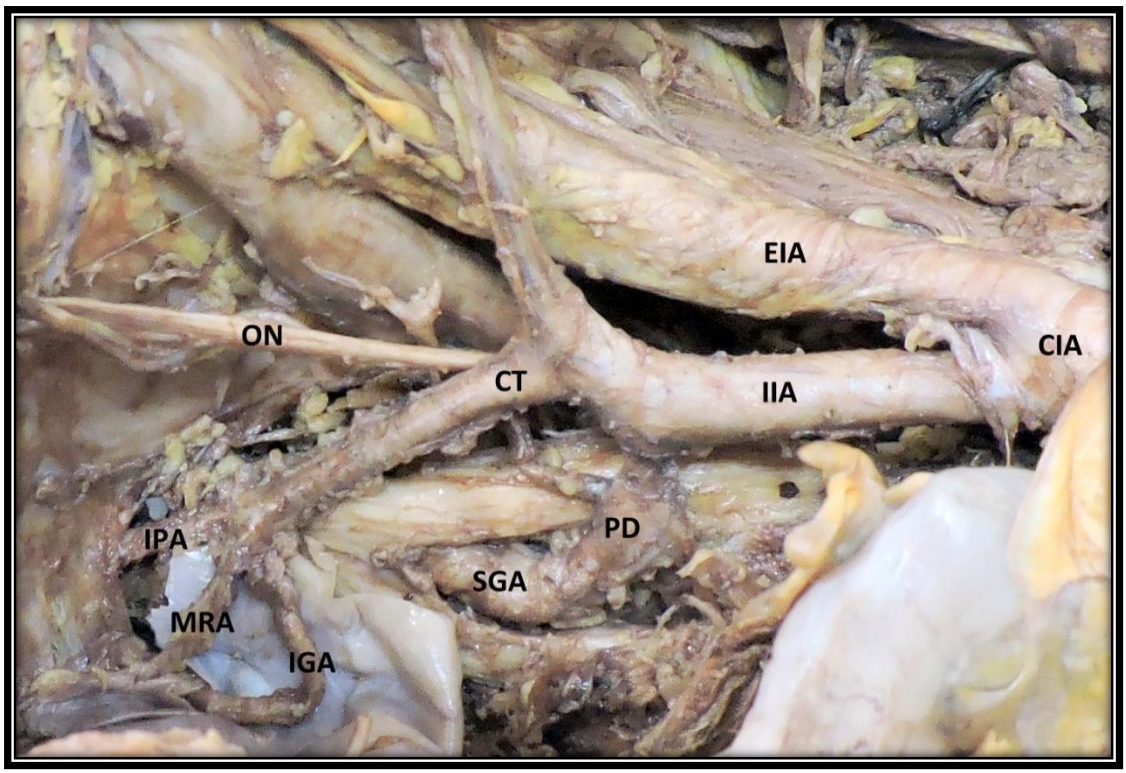

Figure 5.28: Left pelvic half shows the origin of middle rectal artery (MRA) from a common trunk (CT) with internal pudendal artery (IPA) & inferior gluteal artery (IGA). IIA: Internal iliac Artery; CIA: Common iliac artery; EIA: External iliac artery; SGA: Superior gluteal artery