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**STUDIES ON THE LYMPHONODI OF CATS**  
**II. MACROSCOPICAL OBSERVATIONS ON THE LYMPHONODI**  
**OF THE BODY SURFACES,**  
**THORACIC AND PELVIC LIMBS**

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INTRODUCTORY

The writers undertook this work for the purpose of investigating the difference in structures of lymphonodi depending on their locations and species.

In the previous paper, the writers reported about the macroscopical results of a study on nodi of heads and necks. This paper is a report of a study of the nodi of the body surfaces, thoracic and pelvic limbs.

MATERIALS AND METHODS

For this research 24 cats were used, aged 5 days to 7 years, as indicated in table 1.

The methods of observation are much the same as those of the writers' previous report.

TABLE 1. *Materials Used for This Observation*

EXP. NO.	SEX	AGE	WEIGHT (g)	EXP. NO.	SEX	AGE	WEIGHT (g)
1	♂	5 Days	100	13	♂	3 Years	3,750
2	"	1 Month	300	14	"	7 "	4,600
3	"	1 "	350	15	♀	5 Days	60
4	"	1.5 Months	600	16	"	1 Month	180
5	"	1.5 "	620	17	"	1.5 Months	410
6	"	3 "	560	18	"	3 "	600
7	"	3 "	700	19	"	4 "	1,500
8	"	4 "	1,100	20	"	7.5 "	1,550
9	"	4 "	1,100	21	"	2 Years	2,400
10	"	4.5 "	1,050	22	"	2 "	3,200
11	"	1.5 Years	3,200	23	"	2 "	3,800
12	"	2 "	2,800	24	"	5 "	2,750

## RESULTS

1. Groups of Lymphonodi in the Body Surfaces,  
Thoracic and Pelvic Limbs

The lymphonodi found in the body surfaces, thoracic and pelvic limbs were divided into 10 groups by their positions. These groups were named provisionally as follows:

- 1) *Lnn. axillares craniales*; These nodi, 1.95~0.05 cm in the longest diameter, were embedded in fatty tissues around the juncture of *V. thoracica lateralis* with *V. axillaris*. Most of them were somewhat depressed taking ellipsoid shape.
- 2) *Lnn. axillares caudales*; These nodi, 1.95~0.05 cm in the longest diameter, were situated on the chest wall from the third intercostal space to the sixth or seventh intercostal space embedded in fatty tissues. They lay along *A.* and *V. thoracica lateralis*; the majority of them were ellipsoid shaped.
- 3) *Ln. infraclavicularis*; This small nodus, 0.45~0.1 cm in the longest diameter, was slightly depressed-spherical, situated along *V. axillaris*.
- 4) *Lnn. epigastrici caudales*; These nodi, 2.4~0.05 cm in the longest diameter, were embedded in fatty tissues lying along *V. epigastrica superficialis*. They were ellipsoid shaped.
- 5) *Lnn. subinguinales superficiales*; These nodi, 1.95~0.05 cm in the longest diameter, were embedded in fatty tissues lying around the juncture of *V. epigastrica superficialis* with *V. pudendalis externa*. These nodi were also flatly ellipsoid shaped, but some were gourd shaped.
- 6) *Ln. popliteus*; This nodus was embedded in fatty tissues situated in *Fossa poplitea*. This nodus, 1.2~0.15 cm in the longest diameter, was spherical in most cases.
- 7) *Lnn. ischiadici*; These nodi, 1.0~0.1 cm in the longest diameter, were embedded in fatty tissues beneath *M. caudofemoralis*. They were situated along *V. glutaea caudalis* and were depressed-spherical in shape.
- 8) *Ln. femoralis lateralis*; This nodus, 0.33~0.08 cm in the longest diameter, was embedded in a small quantity of fatty tissues situated superficially between *M. tensor fasciae latae* and *M. sartorius*, along the branch of *V. circumflexa femoris lateralis*. This nodus was depressed-spherical.
- 9) *Ln. profemoralis*; This nodus, 0.52~0.05 cm in the longest diameter, was situated on the anterior border of *Femur* lying on the course of the posterior branch of *V. circumflexa ilium profunda*. It was usually flatly ellipsoid shaped.
- 10) *Lnn. epigastrici craniales*; These small nodi, 0.12~0.03 cm in the longest diameter, were flatly spherical; They were situated on *M. rectus abdominis* lying along the superficial branch of *V. epigastrica cranialis* behind *Proc. ensiformis*.

## 2. The Numbers of Lymphonodi

Each of the above mentioned 10 groups of lymphonodi numbered as indicated in table 2.



As to the numbers of lymphonodi found in the body surfaces, thoracic and pelvic limbs, the writers could not discover differences by sexes, individuals or between right and left sides.

But, it should be noted that *Lnn. axillares caudales* (on an average  $3.21 \pm 1.29$ ) and *Lnn. epigastrici caudales* (on an average  $2.41 \pm 1.25$ ) showed conspicuous variations in number.

### 3. The Existence Ratio of Each Group

Each group of lymphonodi showed the existence ratios as indicated in table 3.

TABLE 3. Showing the Ratio of Existence of Each Group

	GROUPS OF LYMPHONODI									
	<i>Axillares craniales</i>	<i>Axillares caudales</i>	<i>Subinguinales superficiales</i>	<i>Popliteus</i>	<i>Epigastrici caudales</i>	<i>Ischiadici</i>	<i>Femoralis lateralis</i>	<i>Infra- clavicularis</i>	<i>Prefemoralis</i>	<i>Epigastrici craniales</i>
Numbers of Sides Found Lymphonodi	48	48	48	48	44	40	11	9	2	1
Numbers of Sides Searched for Lymphonodi	48	48	48	48	48	48	48	48	48	48
Ratio of Existence (%)	100	100	100	100	91.7	83.3	22.9	18.8	4.2	2.1
Groups Differentiated by Ratio of Occurrence	Constant				Nearly Constant		Inconstant			

1) Group of constant existence (existence ratio of 100%); This group includes *Lnn. axillares craniales*, *Lnn. axillares caudales*, *Lnn. subinguinales superficiales* and *Ln. popliteus*.

2) Group of nearly constant existence (existence ratio less than 100% but over 80%); This group includes *Lnn. epigastrici caudales* and *Lnn. ischiadici*.

3) Group of inconstant existence (existence ratio less than 80%); This group includes *Ln. femoralis lateralis*, *Ln. infraclavicularis*, *Ln. prefemoralis* and *Lnn. epigastrici craniales*.

### 4. The Areas of Origin of Afferent Lymphatic Vessels

Each group of lymphonodi, in the areas under study, received lymphatic vessels whose origins were distributed to the area as indicated in table 4.

That is to say;

1) *Lnn. axillares craniales* in all cases receive lymphatic vessels which arise from the radial *Subcutis* and *Aponeurosis* of *Brachium* and *Antebrachium*, the lateral side of

TABLE 4. Showing the Appearances of Areas of Origin of Afferent Lymphatic Vessels Which Entered into Each of Lymphonodi

GROUPS OF LYMPHONODI	REGIONS OF ORIGIN OF AFFERENT LYMPHATIC VESSELS																																		
	Palm of <i>Extremities thoracica</i>	Radial Subcutis of Brachium and Antebrachium	Ulnar Subcutis of Brachium and Antebrachium	Aponeurosis of Brachium and Antebrachium	<i>Regio scapularis</i> 1)	Dorsal Side of <i>Pectus</i>	Lateral Side of <i>Pectus</i>	Ventral Side of <i>Pectus</i> 2)	<i>Regio humeralis</i>	<i>Regio abdominalis cranialis</i> 3)	<i>Regio abdominalis caudalis</i>	<i>Regio glutea</i>	Tail 5)	<i>Regio analis</i>	<i>Regio pudenda</i>	Sole of <i>Extremities pedina</i>	Subcutis of Femur	Subcutis of Crus	Aponeurosis of <i>Extremities pedina</i>	<i>Lnn. axillares craniales</i>	<i>Lnn. axillares caudales</i>	<i>Ln. infraclavicularis</i> 6)	<i>Lnn. epigastrici caudales</i>	<i>Lnn. subinguinales superficiales</i>	<i>Ln. popliteus</i> 7)	<i>Lnn. ischiadici</i> 8)	<i>Ln. femoralis lateralis</i> 9)	<i>Ln. prefemorales</i> 10)	<i>Lnn. epigastrici craniales</i> 11)	Truncus jugularis					
<i>Axillares craniales</i>	F	8	48	48				48													6	48													
	S	48	48	48				48													48	48													
	%	16.7	100.0	100.0				100.0													12.5	100.0													
<i>Axillares caudales</i>	F	1	47					48		48																									
	S	48	47					48		48																									
	%	2.1	100.0					100.0		100.0																									
<i>Infra-clavicularis</i>	F																																		
	S				2																														
	%				9.2																														
<i>Epigastrici caudales</i>	F										44						44							30	28										
	S										44						44							44	44										
	%										100.0						100.0							68.2	63.6										
<i>Subinguinales superficiales</i>	F										28	48					48							44	13										
	S										48	48					48							48	48										
	%										58.3	100.0					100.0							91.7	27.1										
<i>Popliteus</i>	F															48		45	45																
	S															48		45	45																
	%															100.0		100.0	100.0																
<i>Ischiadici</i>	F															2	24	6	40	6	40											12	3		
	S															40	40	15.0	40	40	40									40	40				
	%															5.0	60.0	15.0	100.0	15.0	100.0								30.0	7.5					
<i>Femoralis lateralis</i>	F																																		
	S																																		
	%																																		
<i>Prefemorales</i>	F																																		
	S																																		
	%																																		
<i>Epigastrici craniales</i>	F																																		
	S																																		
	%																																		

Remarks: F; Number of sides where area of origin was found  
S; Number of sides where area of origin was sought.

1) and 2); to *Lnn. cervicales superficiales dorsales*  
3), 6), 11) and most of 4); to *Cavum thoracis*  
9), 10) and most of 7); to *Cavum abdominis*  
Most of 5) and 8); to *Cavum pelvis*

*Pectus* and *Lnn. axillares caudales*, in some cases from the palm of *Extremitas thoracica* and nodi of this group.

2) *Lnn. axillares caudales* in all cases receive lymphatic vessels which arise from the radial *Subcutis* of *Brachium* and *Antebrachium*, *Regio lumbalis*, the lateral and dorsal sides of *Pectus*, in some cases *Lnn. axillares craniales*. In a majority of cases, moreover, they receive also lymphatic vessels from nodi of the same group and in one case from the palm of *Extremitas thoracica*.

3) *Ln. infraclavicularis* in all cases receives lymphatic vessels from *Lnn. axillares craniales*, in some cases *Aponeurosis* of *Brachium* and *Antebrachium* and the lateral side of *Pectus*. In one case this nodus received one branch from *Truncus jugularis*.

4) *Lnn. epigastrici caudales* in all cases receive lymphatic vessels which arise from *Regio abdominis caudalis* and *Subcutis* of *Femur*. In a majority of cases they receive efferent lymphatic vessels from *Lnn. subinguinales superficiales* and nodi of the same group.

5) *Lnn. subinguinales superficiales* in all cases receive lymphatic vessels which arise from *Regio glutea* and *Regio pudendalis*. When *Lnn. epigastrici caudales* are present, the efferent lymphatic vessels from them in all cases enter into nodi of this group. In some cases they receive lymphatic vessels from nodi of the same group, and in many cases *Regio abdominis caudalis* and *Subcutis* of *Femur*.

6) *Ln. popliteus* in all cases receives lymphatic vessels which arise from the sole of *Extremitas pelvina*, *Subcutis* of *Crus* and *Aponeurosis* of *Extremitas pelvina*, but no efferent lymphatic vessels of other nodi enter into this group.

7) *Lnn. ischiadici* in all cases receive lymphatic vessels which arise from *Subcutis* of *Femur* and *Aponeurosis* of *Extremitas pelvina*, in many cases *Regio analis*. In some cases they receive lymphatic vessels which arise from the tail, the sole of *Extremitas pelvina*, *Subcutis* of *Crus*, *Ln. popliteus* and nodi of the same group.

8) *Ln. femoralis lateralis* in all cases receives lymphatic vessels which arise from *Regio glutea*, *Subcutis* of *Femur* and *Aponeurosis* *Extremitas pelvina*.

9) *Ln. prefemoralis* in all cases receives lymphatic vessels which arise from *Regio lumbalis*, *Regio glutea* and *Subcutis* of *Femur*.

10) *Lnn. epigastrici craniales* in all cases receive lymphatic vessels which arise from *Regio abdominis cranialis*.

#### 5. The Numbers of 3 Types of Lymphonodi According to Afferent Lymphatic Vessels

According to the state of their afferent lymphatic vessels, the writers classified the lymphonodi into 3 types of Z, ZT and T in previous paper.

The observed numbers of each type of lymphonodi were distributed in each group as shown in table 5.

In *Lnn. axillares craniales*, the majority of cases (53 cases among 55) (96.4%) were type ZT and only 2 cases (3.6%) were type T.

In *Lnn. axillares caudales*, slightly more than one half of cases (91 cases among 154) (59.1%) were taken by type ZT, 48 cases (31.2%) by type Z and the remainder (9.7%) by type T.

TABLE 5. Numbers of Writers' Proposed 3 Types Found in Each Group of Lymphonodi

GROUPS OF LYMPHONODI	TYPES OF LYMPHONODI						TOTAL	
	Z		Z T		T		Cases	%
	Cases	%	Cases	%	Cases	%		
<i>Axillares craniales</i>	0	0	53	96.4	2	3.6	55	100
<i>Axillares caudales</i>	48	31.2	91	59.1	15	9.7	154	100
<i>Infraclavicularis</i>	0	0	9	100.0	0	0	9	100
<i>Epigastrici caudales</i>	16	16.3	79	80.3	3	3.1	98	100
<i>Subinguinales superficiales</i>	4	7.1	50	89.3	2	3.6	56	100
<i>Popliteus</i>	48	100.0	0	0	0	0	48	100
<i>Ischiadici</i>	30	68.1	14	31.9	0	0	44	100
<i>Femoralis lateralis</i>	11	100.0	0	0	0	0	11	100
<i>Prefemoralis</i>	2	100.0	0	0	0	0	2	100
<i>Epigastrici craniales</i>	2	100.0	0	0	0	0	2	100

In *Ln. infraclavicularis*, all cases were type ZT.

In *Lnn. epigastrici caudales*, the majority of cases (79 cases among 98) (80.6%) were taken by type ZT, 16 cases (16.3%) by type Z and only 3 cases (3.1%) by type T.

In *Lnn. subinguinales superficiales*, 50 cases among 56 (89.3%) were taken by type ZT, 4 cases (7.1%) by type Z and only 2 cases (3.6%) by type T.

In *Lnn. ischiadici*, 30 cases among 44 (68.1%) were taken by type Z and 14 cases (31.9%) by type ZT.

In *Ln. popliteus*, *Ln. femoralis lateralis*, *Ln. prefemoralis* and *Lnn. epigastrici craniales*, all cases were type Z.

It is especially noteworthy that the variations of numbers of lymphonodi correlate with the appearance of the writers' type T which receives only efferent lymphatic vessels of other nodi. It should be noted that the majority of nodi of type T, which are generally smaller than those of types Z and ZT, showed a wide ring-formed sinus where blacked with India ink, further, such a sinus was connected with an afferent and efferent lymphatic vessel each, in the center of whose nodus a small white follicle was conspicuous without black color.

Such a picture found in type T appeared in some small nodi of the writers' inconstant group which usually showed type Z.

#### 6. The Communications between Adjacent Lymphonodi by Lymphatic Vessels

In these observations, the writers also found that the lymph stream circulated between adjacent lymphonodi by lymphatic vessels.

Each type of the communications classified in previous paper was found in each group of lymphonodi as shown in table 6.

TABLE 6. Showing Types of Communication in Each Group of Lymphonodi

GROUPS OF LYMPHONODI	TYPES OF COMMUNICATION						TOTAL		
	A		B		C		Cases	%	
	Cases	%	Cases	%	Cases	%			
In {	<i>Axillares craniales</i>	1	50.0	1	50.0	0	0	2	100
	<i>Axillares caudales</i>	3	20.0	7	46.7	5	33.3	15	100
	<i>Epigastrici caudales</i>	1	3.7	0	0	26	96.3	27	100
	<i>Subinguinales superficiales</i>	0	0	3	60.0	2	40.0	5	100
Between {	<i>Axillares craniales</i> and <i>Axillares caudales</i>	0	0	7	58.3	5	41.7	12	100
	<i>Epigastrici caudales</i> and <i>Subinguinales superficiales</i>	0	0	0	0	27	100.0	27	100
Total	5	5.7	18	20.4	65	73.9	88	100	

Out of 88 cases of the communications found in these observations, 27 cases each were found in *Lnn. epigastrici caudales* and between *Lnn. epigastrici caudales* and *Lnn. subinguinales superficiales*, 15 cases in *Lnn. axillares caudales*, 12 cases between *Lnn. axillares craniales* and *Lnn. axillares caudales*, 5 cases in *Lnn. subinguinales superficiales* and 2 cases in *Lnn. axillares craniales*.

As to the appearance of each type, in *Lnn. axillares craniales*, type A and B were found one case each (50% each).

In *Lnn. axillares caudales*, 7 cases among 15 (46.7%) were found to belong to type B, 5 cases (33.3%) to type C and 3 cases (20%) to type A.

In *Lnn. epigastrici caudales*, the majority of cases (26 cases among 27) (96.3%) were found to be type C and only 1 case (3.7%) to be type A.

In *Lnn. subinguinales superficiales*, 3 cases among 5 (60%) were found to belong type B and the remainder (40%) to type C.

Between *Lnn. axillares craniales* and *Lnn. axillares caudales*, 7 cases among 12 (58.3%) were found to belong to type B and 5 cases (41.7%) to type C.

Between *Lnn. epigastrici caudales* and *Lnn. subinguinales superficiales*, all cases were type C.

#### DISCUSSION

The lymphonodi found in the body surfaces, thoracic and pelvic limbs were divided into 10 groups. Out of them, as to 3 groups of *Ln. femoralis lateralis*, *Ln. prefemoralis* and *Lnn. epigastrici craniales*, the writers could not find any descriptions in cats, in works by MANABE, REIGHARD et JENNINGS, SUZUKI,<sup>11)</sup> TAYLOR et WEBER and TOMITA.

*Ln. femoralis lateralis*, found between *M. tensor fasciae latae* and *M. sartorius* on the lateral side of *Femur*, does not exist in other animals, although

it may be compared with *Lg. coxalis* in the ox (Sisson).

*Ln. prefemoralis* seems to fall under the same named lymphonodi in the horse and ox (Sisson), with respect to their position, and afferent and efferent lymphatic vessels.

As *Lnn. epigastrici craniales*, found on *M. rectus abdominis* behind *Proc. ensiformis*, also have not been found in the other domestic animals (Sisson), it was named provisionally from the position.

The writers' *Lnn. ischiadici* is the same as *Ln. coccygicus* named by MANABE. As this node falls under *Lgg. ischiadicae* in the horse and ox (Sisson) with regard to position and lymphatic vessels, it should be named *Lnn. ischiadici* rather than "*Ln. coccygicus* (MANABE)".

As to the numbers of lymphonodi, the present writers could not point out variations by sexes, individuals or between right and left sides. But in the two groups of *Lnn. axillares caudales* and *Lnn. epigastrici caudales*, the writers found somewhat more variation in number than in other groups.

JOB considered that the so-called accessory nodi were caused to appear in pathological conditions in the rat.

STILES stated that *Lnn. axillares* increased in number during lactation.

In No. 22 cat during lactation *Lnn. epigastrici caudales* and *Lnn. axillares caudales*, receiving lymphatic vessels from the mammary gland, did not especially show any increase in number. But, although the points of origin of their afferent lymphatic vessels had no pathological conditions, such as an injury, a skin disease etc., a variation in number was noted in 2 groups of *Lnn. axillares caudales* and *Lnn. epigastrici caudales*. As each group of lymphonodi, on the whole, differs in respect to the origin of their afferent lymphatic vessels, it should be noted as a difference depending on location.

The writers could also classify each group of lymphonodi into 3 groups of constant, nearly constant and inconstant according to the difference of existing ratio.

The writers' inconstant group may be to the same as GULLAND's tertiary lymph gland, because no definite tendency of their appearance could be noted in connection with age.

Each type of lymphonodi, divided according to the states of their afferent lymphatic vessels, also displayed a different tendency in each group, as was noted in the previous paper.

HORII stated that the differences in structure depending on location of lymphonodi were connected with the ratio between the lymphoid tissues and sinus in the node. He pointed out that the lymphoid tissues of "primary lymphonodus" were very much larger in quantity than those of "secondary lymphonodus" in rabbits, but such a tendency was slight in rats and guinea-pigs, while it did not

appear in hamsters, dogs, cats, pigs and oxen.

The writers pointed out that type Z, corresponding to HORII's primary lymphonodus, T and ZT, corresponding to HORII's secondary lymphonodus, were in the cat mixed in the majority of the groups of lymphonodi.

It should be of interest to observe the differences of microscopical structures in each type.

STILES observed that lymphonodi increased during the lactation is a very minute, that it consists of a single lymphoid follicle surrounded by an unbranched lymph sinus, connected with only one afferent and one efferent lymphatic vessel and that the condition is very like that in the stage of development.

KOIZUMI, SUZUKI<sup>12)</sup> and others reported that small lymphonodi found in fatty tissues showed mostly embryonal and young lymphonodi, and that most of them appeared in the lymph-center.

The writers' type T, which is smaller than lymphonodi of types Z and ZT, and some small nodi of the writers' inconstant group, which usually showed type Z, may be the same as those reported by STILES, KOIZUMI and SUZUKI,<sup>12)</sup> because the writers observed that these nodi showed frequently such states as to make the existence of young nodi conjectural. That is to say, most of these nodi consisted of a wide ring-formed sinus blackly colored with India ink, which connected with only one afferent and one efferent lymphatic vessel; further, in the center of this nodus a white small follicle was conspicuous without black color.

In this observation the writers also found that the lymph stream circulated between adjacent lymphonodi through lymphatic vessels.

Most of types B and C may be the same as the remainder of lymphatic plexus existing in development stage as stated by GULLAND.

ANDO reported that *Ln. axillaris*, correspondent to the writers' *Lnn. axillares craniales* and *Lnn. axillares caudales*, and *Ln. inguinalis*, correspondent to the writers' *Lnn. subinguinales superficiales* and *Lnn. epigastrici caudales*, developed from vascular lymphonodus anlage and formed one nodus each.

The writers observed that these lymphonodi showed great variation in number; all cases of the communications of type A were seen in them. These facts may give reason to consider that type A is the form connected solely with the marginal sinus in the multiplicable condition of lymphonodi as reported by ANDO.

#### SUMMARY

The results are summarized as follows:

1. The lymphonodi found in the body surfaces, thoracic and pelvic limbs were classified into 10 groups: *Lnn. axillares craniales*, *Lnn. axillares caudales*, *Ln. infraclavicularis*, *Lnn. epigastrici caudales*, *Lnn. subinguinales superficiales*,

*Ln. popliteus*, *Lnn. ischiadici*, *Ln. femoralis lateralis*, *Lnn. prefemoralis* and *Lnn. epigastrici craniales*.

2. No definite variation of numbers of lymphonodi could be pointed out by sexes, individuals or between the right and left sides in this observation. But, about each group of lymphonodi, *Lnn. axillales caudales* and *Lnn. epigastrici caudales* have shown conspicuous variations in number.

3. The 10 groups of lymphonodi also were divided into 3 groups of "constant", "nearly constant" and "inconstant" by the difference of their existing ratio.

4. The origin of afferent lymphatic vessels entering into each group of lymphonodi, on the whole, was determined respectively.

5. Each type, classified according to the states of their afferent lymphatic vessels, displayed different tendencies in each group of lymphonodi.

6. Each type of the communication among lymphonodi by lymphatic vessels was found in the writers' 4 groups of *Lnn. axillares craniales*, *Lnn. axillares caudales*, *Lnn. epigastrici caudales* and *Lnn. subinguinales superficiales* and also between lymphonodi of different groups.

The appearance of the types of communications may be correlative with the groups of lymphonodi which show a variation in number.

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## EXPLANATION OF PLATE

## Symbols Common to Figs. 1 and 2

- a. *Lnn. axillares craniales*
- b. *Lnn. axillares caudales*
- c. *Ln. infraclavicularis*
- d. *Lnn. epigastrici caudales*
- e. *Lnn. subinguinales superficiales*
- f. *Ln. popliteus*
- g. *Lnn. ischiadici*
- h. *Ln. femoralis lateralis*
- i. *Ln. prefemoralis*
- j. *Lnn. epigastrici craniales*
- k. *Lnn. cervicales superficiales dorsales*
- l. *Lnn. cervicales superficiales ventrales*
- I. *V. axillaris*
- II. *V. thoracica lateralis*
- III. *V. brachialis*
- IV. *V. cephalica*
- V. *V. epigastrica superficialis*
- VI. *V. pudendalis externa*
- VII. *V. glutaea caudalis*
- VIII. *V. femoralis*
- IX. Branch of *V. circumflexa femoris lateralis*
- X. Branch of *V. circumflexa ilium profunda*
- XI. Branch of *V. epigastrica cranialis*
- XII. Branch of what anastomosed with *V. glutaea caudalis* and  
*V. saphena parva*

## Errata for Vol. 3, No. 2

Page	Line	Delete	Insert
100	10	WILLIAM et RICHARD	TAYLOR et WEBER
103	34	No. 6, 15	No. 6, 45
104	16	WILLIAM, T. & W. RICHARD	TAYLOR, W. & R. WEBER

FIG. 1. *Lymphonodi, Lymphatic Vessels (Black Line) and Veins (Stippled) Accompanied with Lymphatic Vessels Shown Diagrammatically; Lateral View of the Body*

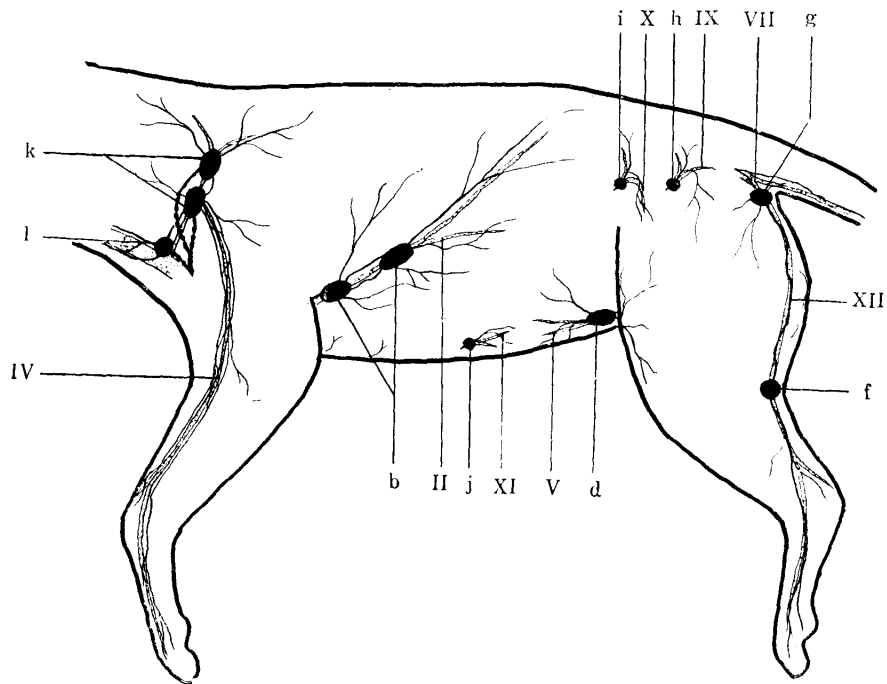


FIG. 2. *Lymphonodi, Lymphatic Vessels (Black Line) and Veins (Stippled) Accompanied with Lymphatic Vessels Shown Diagrammatically; Ventral View of the Body*

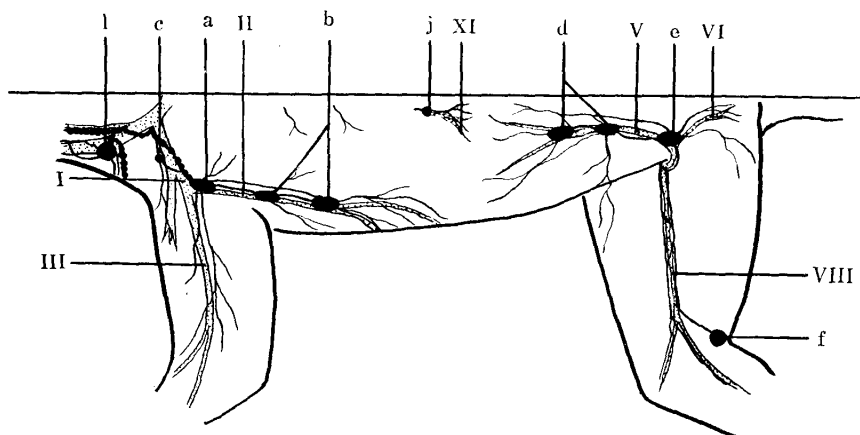


FIG. 3. *Type C of Communication Found between Lnn. epigastrici caudales and Lnn. subinguinales superficiales of No. 7 Cat*

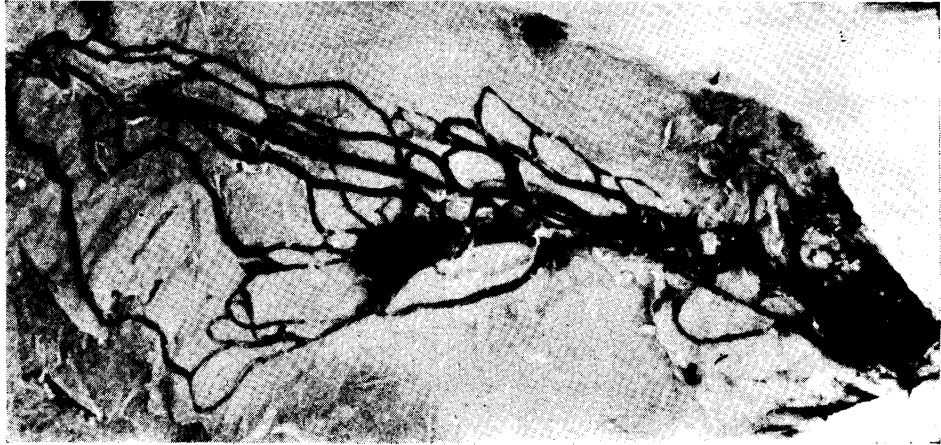


FIG. 4. *Type C of Communication Found between Lymphonodi in Lnn. epigastrici caudales of No. 23 Cat*

