SECOND ANNUAL REPORT OF THE COMMITTEE OF COLLECTIVE INVESTIGATION OF THE ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND FOR THE YEAR 1890–91.[1] Reported by ARTHUR THOMSON, M.A., M.B., *Lecturer on Anatomy, University of Oxford.*

THE following questions were issued by the Committee of Collective Investigation of the Anatomical Society early in October 1890:—

1. Mode of origin of the following vessels, usually described as branches of the thyroid axis, viz., inferior thyroid, suprascapular, ascending cervical, and transverse cervical arteries.
2. Mode of distribution of the last dorsal and first lumbar nerves.
3. To note in each subject the distance of the lower margin of the kidney on each side from the iliac crest. The sex of the subject to be stated, and any naked-eye evidence of disease of the organs to be recorded.
4. The distribution of the cutaneous nerves on the dorsum of the foot and toes.
5. To note the occurrence of a diverticulum ilei (Meckel's), in each case giving details of its position and connections. It is particularly requested that the number of subjects examined be recorded, whether the diverticulum be present or no.

The returns have been most gratifying in point of numbers, and are a decided improvement on last year's Report. Twenty of the thirty-nine institutions to which notices were sent have participated in the scheme and have returned answers to some, if not to all, the questions. The Universities and the larger provincial schools are now well represented, and as the material at their command is extensive, their co-operation greatly enhances the value of the report.

[1] The First Report appeared in the *Journal of Anatomy and Physiology*, October 1890.

In three instances schools which sent in returns last year have taken no share in the present report.

Subjoined is a list of the schools to which notices were sent. An asterisk is placed opposite those from which returns have been received:—

St Bartholomew's Hospital, London.
*Charing Cross Hospital, London.
*St George's Hospital, London.
Guy's Hospital, London.
King's College, London.
London Hospital, London.
*St Mary's Hospital, London.
*Middlesex Hospital, London.
St Thomas' Hospital, London.
*University College, London.
*Westminster Hospital, London.
*London School of Medicine for Women.
Cook's School of Anatomy.
*University of Oxford.
University of Cambridge.
*Queen's College, Birmingham.
*Bristol Medical School.
*School of Medicine, Yorkshire College, Leeds.
*School of Medicine, University College, Liverpool.
*The Owens College, Manchester.
Medical School, Firth College, Sheffield.
*University of Durham School of Medicine, Newcastle-on-Tyne.
*University of Edinburgh.
School of Medicine, Royal College of Surgeons, Edinburgh.
*School of Medicine, Minto House, Edinburgh.
University College, Dundee.
School of Medicine for Women, Edinburgh.
*University of Aberdeen.
*University of Glasgow.
Anderson College, Glasgow.
St Mungo's College, Glasgow.
Western Medical School, Glasgow.
*School of Physic, Trinity College, Dublin.
Carmichael School of Medicine, Dublin.
*Catholic University School of Medicine, Dublin.
Royal College of Surgeons, Ireland.
Queen's College, Belfast.
Queen's College, Cork.
Queen's College, Galway.

REPORT.

Question I.

A large number of replies to the question on the branches of the thyroid axis have been sent in, and the Committee heartily thank the following gentlemen for their assistance:—

Messrs James Musgrove, University of Edinburgh; Gordon Brodie, Middlesex Hospital, London; C. Devereux Marshall, University College, London; J. J. Long, Trinity College, Dublin; P. R. W. Santi, School of Medicine, Newcastle-on-Tyne; J. Symington, Minto House, Edinburgh; W. Thelwall Thomas, University College, Liverpool; J. A. H. White, Queen's College, Birmingham; Edward Fawcett, Yorkshire College, Leeds; —— ——, St Mary's Hospital, London;

A. Robinson and J. B. Carter, The Owens College, Manchester; James Black, Westminster Hospital, London; Hugh Sutherland, University of Aberdeen; P. Brady and J. Dunne, Catholic University School of Medicine, Dublin; A. Thomson, University of Oxford; Misses Piercy and Bate, London School of Medicine for Women.

It has been found somewhat difficult to summarise the results obtained. It was felt that minute descriptions of the various anomalies met with would convey but a poor impression of the arrangement of the various vessels; on the whole, it appeared best to tabulate the results in a graphic manner (see Tables I. and II.). In Table I., we have the nine most common modes of arrangement, placed in order according to their frequency. The figures on the table indicate the number of cases recorded out of a total of 544, and subjoined is also the percentage of occurrence of each type, the types being lettered A, B, C, &c., for convenience of reference; where types are more or less allied, then the figures are lettered thus—P^1, P^2, P^3 (Table II.).

In Table II. we have twenty-seven modes of arrangement figured; as they are not so frequently met with, they have been printed off on a reduced scale. The numbers of their occurrence out of the total of 544 cases examined only has been given. The percentage of frequency has been omitted.

It may be said here that an effort has been made to restrict as far as possible the number of types, and the slighter variations have been, when possible, included under what may be termed the more common type. Again, latitude has been allowed in reference to the exact points of origin of the aberrant arteries, *i.e.*, whether they arise from the II. or III. parts of the subclavian. On the whole, however, the tables will be found to represent fairly accurately the numerous variations observed in the course of this investigation.

The various arteries are lettered as follows:—Inferior thyroid, I.T.; ascending cervical, A.C.; transverse cervical, T.C.; suprascapular, S.S.; superficial cervical, S.C.; posterior scapular, P.S.; internal mammary, I.M.; vertebral, V.

As far as possible only those branches of the subclavian which are usually offsets of the thyroid axis are represented in the figure, as the enumeration of other details might tend to obscure the results desired. As to the relative frequency of variations on the right and left sides of the neck, the results obtained are not such as to enable us to draw any definite conclusions; indeed, there appears to be no greater tendency for the occurrence of these varieties on one side more than the other.

Dr Robinson, of The Owens College, Manchester, describes a case in which the posterior scapular artery arose as a branch from the superior intercostal, and Mr P. Brady and Mr J. Dunne record a case, in the report from the Catholic University Medical School, Dublin, wherein the inferior thyroid, which was a branch of the thyroid axis, was double, the two trunks embracing the common carotid artery.

No attempt has been made to classify the different arteries according to the sources from which they arise. Should this be desirable, the means for doing so are readily accessible in Tables I. and II.

TABLE I.—*Variations in the Branches of the Thyroid Axis. Total number examined* 544.

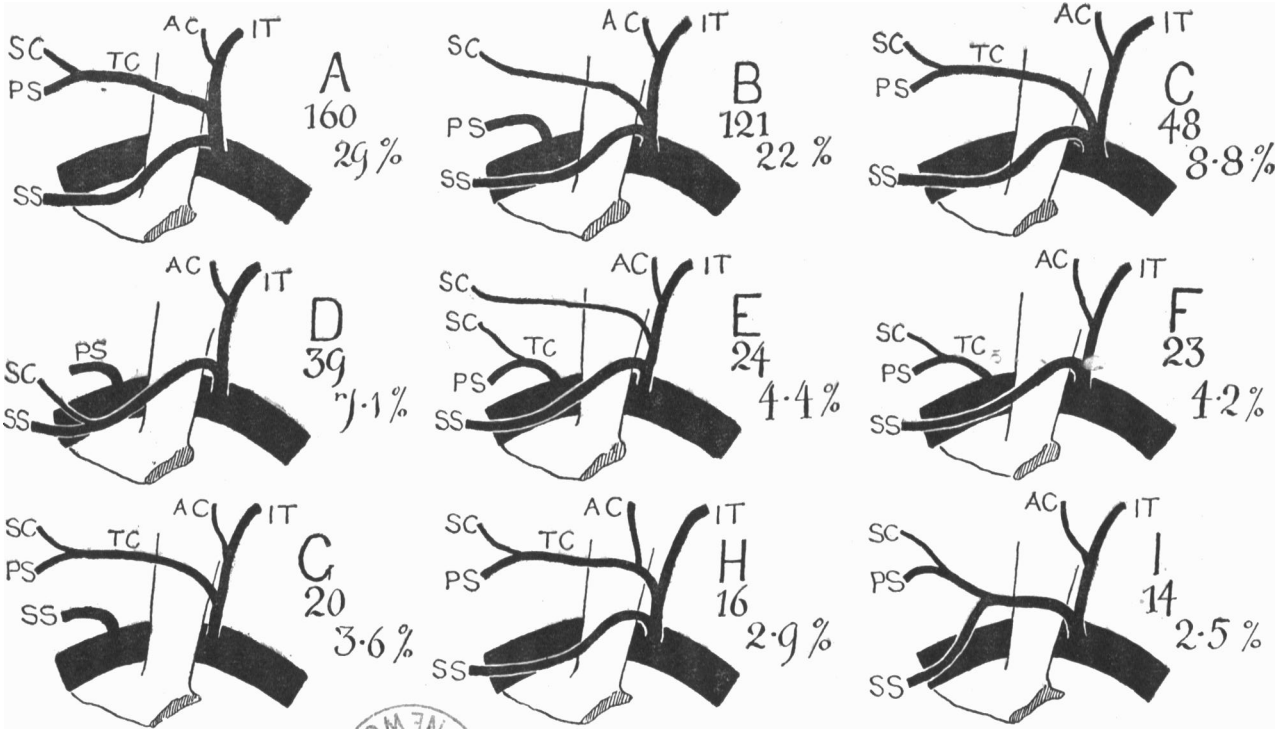
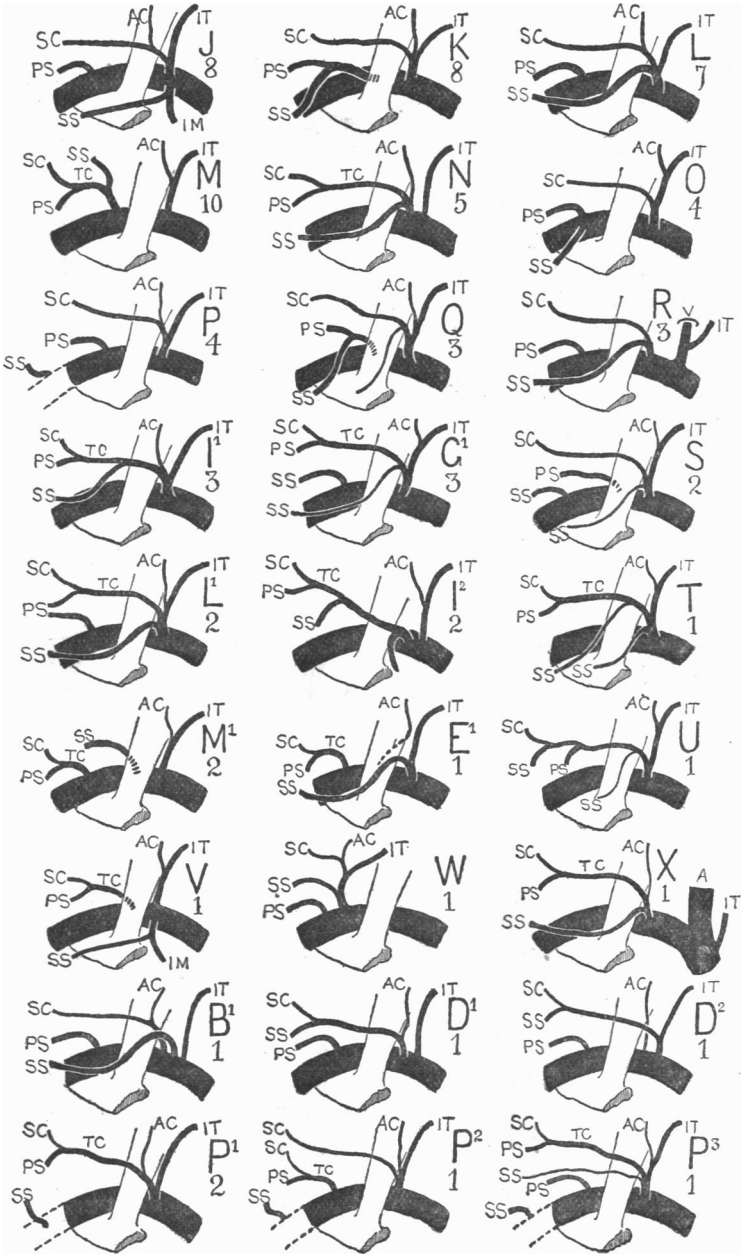


TABLE II.—*Variations in the Branches of the Thyroid Axis. Total number examined* 544.



QUESTION II.

The replies to this question, on the distribution of the last dorsal and first lumbar nerves, are few in number. This is readily explained, for to have answered fully would have necessitated a very careful supervision of the dissections at various stages, and several teachers have written to the secretary regretting that they have had to abandon the investigation owing to the uncertain and unsatisfactory nature of the results obtained by their assistants.

The following sent in reports:—Messrs Montague Griffin, Trinity College, Dublin; Walter Chapman, Queen's College, Birmingham; Gordon Brodie, Middlesex Hospital, London. The Misses Piercy and Bale, London School of Medicine for Women.

In arranging the facts observed, the variations only are noticed in the following summary, accepting as normal that arrangement which is described in the standard English text-books.

Eighty-three subjects have been examined, and details thought worthy of note by the various observers are enumerated in the subjoined report.

Mr MONTAGUE GRIFFIN in this connection sends an interesting note in regard to the nerve supply of the pyramidalis:—"I have been able," writes he, "to verify the nerve supply of this muscle in only seven cases. In others, where the nerve had been found, previous dissection had destroyed its connections. When found it was always by the adoption of one method. The sheath of the muscle was opened, the apex detached from the linea alba, and the muscle reflected downwards, carefully looking for any filament of nerve entering its posterior surface. The first nerve which was seen entering its posterior surface was proved, on tracing it outward, to arise on each side from the ilio-hypogastric; it passed inwards on both sides beneath the pillars of the ring. The remaining six nerves observed supplying the muscle came from the last dorsal nerve. The nerve pierces the substance of the rectus muscle about the middle of the posterior surface of the pyramidalis. The last nerve supply which I found would, I thought, have verified the condition which Ellis describes as the normal. A nerve filament passed up out of the inguinal canal, seemingly from the ilio-inguinal nerve, and passing beneath the pillars of the ring entered the posterior surface of the muscle. However, further examination of this subject proved that this was the case where the last dorsal nerve played the part of the ilio-inguinal—it would seem as if, having gone on another man's errand in supplying the inguinal region, it recollected itself and sent back a twig to perform what *seems* to be one of its normal duties—the nerve supply of the pyramidalis."

Summary of Variations met with in the Origin and Distribution of the Last Dorsal and First Lumbar Nerves.

XII. Dorsal Nerve. *Anterior primary division absent* in one case—replaced by a branch from I. lumbar, which likewise furnishes ilio-hypogastric and ilio-inguinal.

Do. do. *Iliac branch absent* in five cases—replaced by iliac branch of ilio-hypogastric.

Dorsi-Lumbar Nerve present in five out of 6 subjects examined.

Communicating Branches between XII. Dorsal and I. Lumbar nerves in the abdominal wall present in two out of seven subjects examined (Queen's College, Birmingham) and in many (number not stated) cases from Trinity College, Dublin.

I. Lumbar Nerve—

Ilio-hypogastric absent in two cases—replaced by the ilio-inguinal, which in both cases took a course similar to the external cutaneous across the iliac fossa, subsequent to which in one case its distribution was normal, in the other instance it furnished an external cutaneous nerve to the thigh.

Ilio-hypogastric (*Iliac branch*) *absent* in thirteen cases—replaced by iliac branch of XII. dorsal.

According to Mr Montague Griffin, B.A., Dublin, the iliac branch of ilio-hypogastric pierced the internal oblique immediately after its origin, and then lay for some distance between the internal and external oblique muscles previous to piercing the latter, whilst in this position it forms communications with the XII. dorsal. In the gluteal region it formed a network of communications with the external cutaneous branches of the posterior primary divisions of the lumbar nerves, and in all cases supplied the region of the tensor fasciæ femoris muscle by means of a special branch.

Ilio-hypogastric (*Hypogastric branch*) usually became cutaneous 2 to 2½ inches above level of the pubis; in one case it appeared 4 inches above that level.

Ilio-hypogastric and ilio-inguinal in 9 subjects arose by a conjoint trunk.

Ilio-inguinal arose in one case from II. lumbar nerve.

Do. *absent* in two cases. In one replaced by XII. dorsal, in the other by genital branch of genito-crural.

Do. reciprocal in point of development with ilio-hypogastric.

Muscular Nerves—

Muscular branches were noticed in one case coming off from the ilio-hypogastric and ilio-inguinal to supply the muscles of the abdominal wall.

A muscular branch in one case arose from the hypogastric branch of the ilio-hypogastric to supply the *pyramidalis* muscle.

The psoas parvus was observed in one case to obtain its nerve-supply from the I. lumbar nerve.

The nerve to the *Pyramidalis*, with the above exception, was observed in seven cases examined to spring from the XII. dorsal nerve, which, after piercing the rectus muscle, entered the deep surface of the pyramidalis about its middle. In one case, in which the XII. dorsal nerve took the place of the ilio-inguinal, this branch passed up behind the internal pillar of the external abdominal ring to reach the deep surface of the muscle.

Total number of subjects examined, eighty-three.

Question III.

The following observers have furnished records of the distance of the kidneys from the iliac crest:—

Messrs J. H. M'Gee, Catholic University Medical School, Dublin; P. Macleod Yearsley, Westminster Hospital; ——— ———, St Mary's Hospital; F. H. Marston, Queen's College, Birmingham; J. H. Teacher, University of Glasgow; Gordon Brodie, Middlesex Hospital; Edward Fawcett, Yorkshire College, Leeds; James Musgrove, University of Edinburgh; A. Robinson, Owens College, Manchester; W. H. Thomson, Trinity College, Dublin; A. H. Walker, Charing Cross Hospital; A. Thomson, University of Oxford.

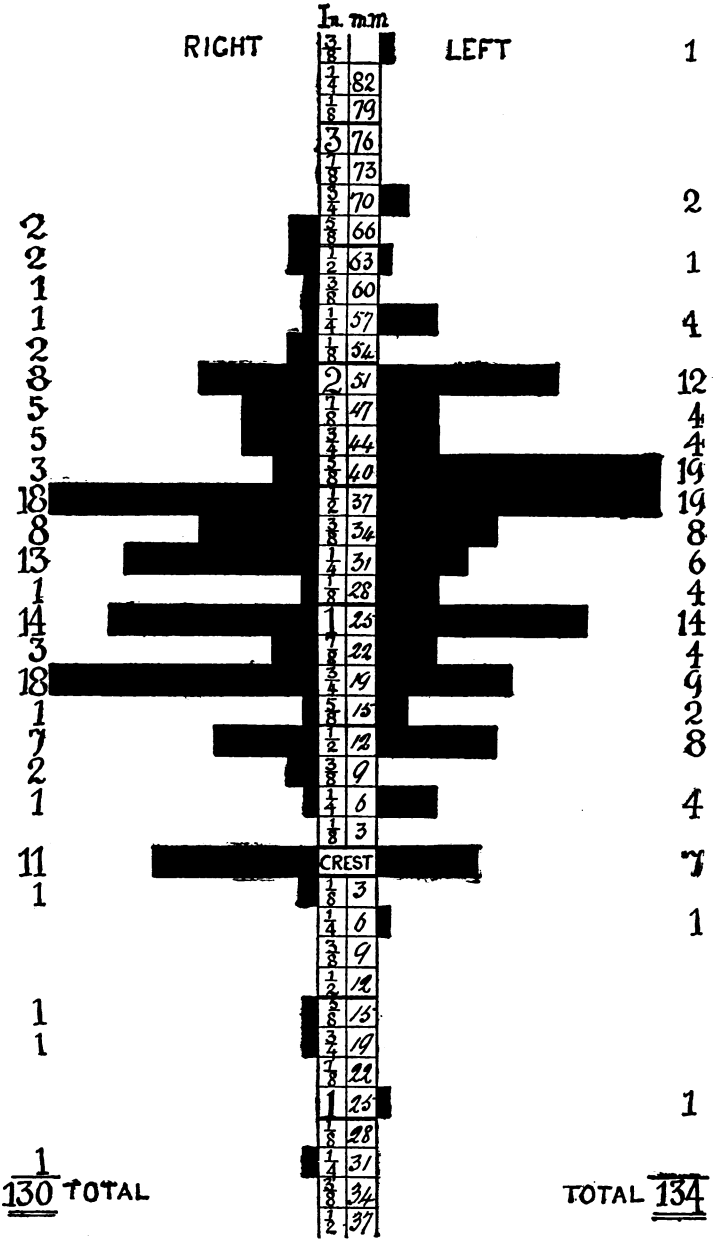
Here again an effort has been made to combine the advantages of a numerical and graphic method; Tables III. and IV. show, placed side by side, the results obtained by such an arrangement of the measurements in the males and females respectively. The central column in each figure represents in inches and corresponding millimetres the distance above and below the iliac crest. On either side is arranged in black blocks, drawn to scale, the number of cases which have been noted in which the lower border of the organ corresponds to the level shown on the scale above or below the iliac crest.

A glance at the chart will prove how misleading an average may be, and for this reason no attempt has been made to summarise the results. A curve uniting the extremes of the black blocks will more correctly express the facts. The somewhat striking differences to be noted between the number of cases recorded at, say 1 inch above the iliac crest and those at $1\frac{1}{8}$ inch, is readily explained by reason of the tendency to avoid small fractions of an inch; if, therefore, we would disregard all measurements below $\frac{1}{4}$ of an inch, we are likely to get results more generally uniform, and yet sufficiently accurate for all purposes.

In the males in one case, where both kidneys lay on a level with the iliac crest, the liver was much enlarged. In another case, where the kidneys lay at or about this level, they still retained their fœtal segmentation. Two cases were noted as cirrhotic, which lay about 1 and 2 inches respectively above the crest; and one case, where the left kidney lay $2\frac{1}{4}$ inches above the crest, the organ was remarkable for its very small size.

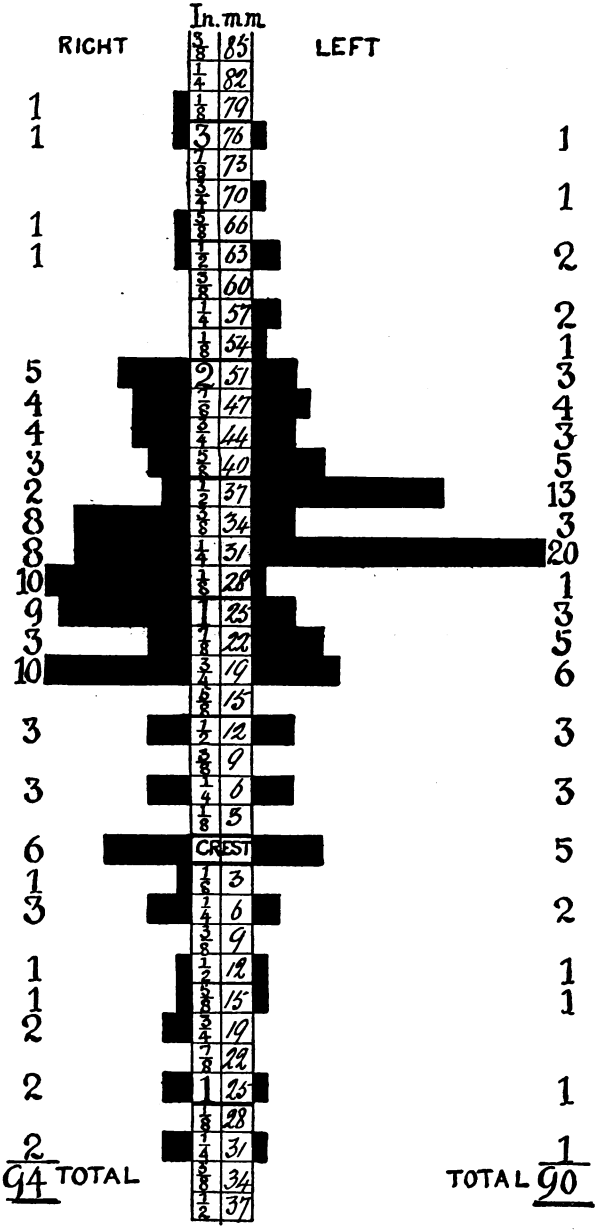
Among the females, a subject was examined in which the kidneys could be moved,—the right from a point $\frac{3}{4}$ of an inch below the crest to a point $\frac{3}{4}$ of an inch above the crest, the left from a point 1 inch below the crest to a point $1\frac{1}{4}$ inch above the crest. In another subject, in which the spinal column was curved laterally to the right in the lumbar region, the right kidney lay $\frac{3}{4}$ of an inch below the iliac crest. In a case where the left kidney lay $1\frac{1}{4}$ inch below the iliac crest the organ itself was enlarged, as also was the spleen; the gall-bladder, too, was much distended. In another case in which

TABLE III.—*Males.*



Note.—Through error these diagrams have not been reduced to an inch scale as was intended.

TABLE IV.—*Females.*



the left kidney lay on a level with the iliac crest, a much-enlarged spleen was noticed. This was also the case in a subject in which the left kidney lay $1\frac{5}{8}$ inch above the crest. In three cases, where the kidneys lay at or near the level of the crest, the organs were noted as enlarged and fatty.

Dr W. H. THOMSON, of Trinity College, Dublin, appends the following note to his report:—

"The kidneys of the female were found to be on a lower level than those of the male. This is not only indicated by the average, but it becomes more clearly shown when the individual cases are examined Thus, eight of the twenty-seven female kidneys on the right side and five on the left were either as low as, or lower than the crest, while only two of the right male kidneys and none of the left were in contact even.

"This suggested the influence of tight lacing in some at least of the female subjects. In one female subject, in which there was much evidence of extreme tight lacing (other than that indicated by kidney level), it was found that the kidney was very high up above the iliac crest, in fact completely hidden by the liver, which was apparently displaced downwards. Moreover, the organ was very small, that is, apparently atrophied from the pressure which the liver exerted upon it."

The same observer notes the average distance of the centre of the curve of the lower border of the kidney from the mid-dorsal line as 7·25 cm. on the right side in males and 7 cm. on the left. This latter distance was also found to be the average on both sides in the female subject.

Mr J. H. TEACHER, of the University of Glasgow, in discussing the differences between the male and female measurements, says—"The difference in the level of the kidneys in the male and in the female subjects seems to be nearly in proportion to the difference in height. But whereas in the female the kidneys were abnormally low from being loose and from depression of the organs, especially the liver, there was only the case of hydronephrosis in which, in the male, the kidney was below the level of the crest of the ilium. In one or two cases in females, where there was great depression of the lower ribs and abdomen, the liver and spleen were depressed upwards; but, as the liver was turned a little so as to be deeper than normal, it is at least doubtful whether the kidney could be drawn up or not."

Measurements have been taken in 448 cases—264 in males, 184 in females. In males the largest number of kidneys on the right side lie between $\frac{3}{4}$ of an inch and $1\frac{1}{2}$ inch above the iliac crest; on the left side between 1 and 2 inches above the crest. Twenty-four kidneys lie at or below the level of the iliac crest out of a total of 264.

In the females forty-eight kidneys lie between $\frac{3}{4}$ of an inch and $1\frac{3}{8}$ inch above the level of the iliac crest on the right side—forty-one between $1\frac{1}{4}$ and $1\frac{5}{8}$ inch above the level of the iliac crest on the left side. Twenty-nine kidneys out of a total of 184 lie either at or

below the level of the iliac crest; or, expressed in other words, 15 per cent. of kidneys in the female are placed either on or below the level of the iliac crest as compared to 9 per cent. in the males.

Dr HERBERT R. SPENCER has forwarded from University College, London, a series of measurements regarding the position of the kidneys in the infant at birth. His report is printed in its entirety.

THE DISTANCE OF THE LOWER MARGIN OF THE KIDNEY FROM THE ILIAC CREST IN THE INFANT AT BIRTH. By HERBERT R. SPENCER, M.D., B.S., M.R.C.P.

The accompanying table is a record of observations on forty human fœtuses which were either still-born or lived only a few hours. Fourteen of them had undergone intra-uterine maceration. The fœtus having been laid supine, with extended lower limbs, the abdomen was opened by a longitudinal median incision, and the kidneys exposed by dividing the rectum and turning it and the descending colon and the cæcum and ascending colon up for a sufficient distance. The small intestines were then held out of the way, and the peritoneum and areolar tissue around the kidney divided so as to clearly define the lower end of the organ. The measurements were taken from the tip of the anterior superior iliac spine to the level of the lower margin of the kidney on each side. The iliac spine was chosen in preference to the top of the crest, owing to the difficulty of accurately measuring the small distance between the top of the crest and the kidney in the new-born child, without greatly disturbing the natural relations, to avoid which, also, the thoracic organs and liver were left *in situ*.

From the table it appears that the right kidney was nearer to the level of the right anterior superior iliac spine than was the left to its corresponding spine in all except nine cases; in three of these it was further removed by $\frac{1}{8}$ of an inch; in the other six it was at the same distance. In two of these six cases (20, 24), however, my notes state that, although the distances were equal, the lower end of the right kidney was situated at a lower level than the left, with reference to a line drawn at right angles to the sagittal plane bisecting the vertebral column. In the cases in which the distance between the anterior superior iliac spine and the kidney was less on the right side, this kidney was also anatomically the lower.

There was no naked-eye disease of the organs which could affect the measurements, the morbid appearances being limited to minute hæmorrhages into the substances of and around the kidney.

No.	Sex.	Length (in inches).	Weight.	Height (in inches) of Right Kidney above AnteriorSuperior Iliac Spine.	Height (in inches) of Left Kidney above AnteriorSuperior Iliac Spine.	Remarks.
			lb. oz.			
1	M.	20¼	8 12	1⅛	1⅛	
2	F.	17¼	3 14	Right kidney $\frac{1}{16}$ lower than	left.	Macerated.
3	M.	20½	5 13	1	1¼	Macerated.
4	M.	18	4 7	¾	⅞	Left diaphragmatic hernia.
5	M.	12¼	1 7½	⅝	¾	
6	F.	18½	4 4	1	1$\frac{1}{16}$	Macerated.
7	M.	13	1 9	⅝	1$\frac{3}{16}$	
8	F.	16	3 8	¾	⅞	Macerated.
9	F.	16½	4 10	¾	1	Macerated.
10	F.	11	1 7	⅝	⅝	
11	F.	14	1 11½	½	¾	Macerated.
12	M.	20	7 0	1$\frac{1}{16}$	1⅛	
13	F.	20½	7 8	1½	1¾	
14	F.	18½	5 9½	1$\frac{5}{16}$	1$\frac{7}{16}$	
15	F.	13	1 4	$\frac{7}{16}$	$\frac{9}{16}$	
16	F.	18½	5 8	¾	⅞	Enormous liver and spleen.
17	M.	20¼	6 7	1$\frac{1}{16}$	1¼	
18	M.	18¼	4 8	(¼ above crest of ilium).	(⅜ above crest of ilium).	Twins.
19	M.	20	5 6	⅞	1¼	
20	M.	19	6 3½	1$\frac{3}{16}$	1$\frac{3}{16}$	
21	M.	18	4 3½	⅞	$\frac{15}{16}$	Macerated.
22	F.	18	4 8	1	1	Macerated.
23	F.	22	8 6	1	1½	Macerated.
24	F.	17	3 12½	$\frac{13}{16}$	$\frac{13}{16}$	
25	M.	19	5 11	1⅛	1¼	
26	F.	12	1 2½	⅝	¾	Macerated.
27	M.	18½	5 6½	1	1¼	Macerated.
28	M.	20	4 8	⅞	¾	Macerated.
29	F.	19	5 4	⅝	⅝	
30	M.	12½	1 13	⅝	⅝	
31	M.	15	2 7½	¾	⅞	
32	M.	18½	4 13	¾	1	
33	M.	20	5 11½ (without brain).	1¼	1¾	
34	M.	14	1 12	⅞	¾	Macerated.
35	M.	18½	5 8	1½	1¼	Macerated.
36	F.	17½	3 9	$\frac{9}{16}$	$\frac{15}{16}$	
37	M.	20	6 6	¾	⅞	
38	F.	15¼	2 7½	$\frac{11}{16}$	$\frac{13}{16}$	Triplets.
39	F.	15⅜	2 8	¾	⅞	
40	F.	15¼	2 6½	¾	⅞	

QUESTION IV.

A comparatively small number of observations has been made on the distribution of the cutaneous nerves to the dorsum of the foot. Returns have been received from the following:—

Messrs Gordon Brodie, Middlesex Hospital; E. H. Shaw, University College; ——— ———, St Mary's Hospital; P. Macleod Yearsley, Westminster Hospital; W. A. Harris, Queen's College, Birmingham; E. Fawcett, Yorks College, Leeds; J. W. Smith and J. B. Carter, The Owens College, Manchester; P. R. W. Santi, School of Medicine, Newcastle-on-Tyne; J. Symington, Minto House, Edinburgh; H. L. Sutherland, University of Aberdeen; A. F. Dixon, Trinity College, Dublin; A. Blaney, Catholic University Medical School, Dublin; A. Thomson, University of Oxford. Misses Piercy and Bale, London School of Medicine for Women.

A total of 229 feet have been examined, and in tabulating the results the graphic method has been adopted in preference to the descriptive. Twelve types are figured, and lettered A, B, C, &c., in order of their frequency. The first six are arranged in such a way as to show how the external saphenous replaces the external division of the musculo-cutaneous nerve, or *vice versa*. The last six (H, K, I, F, G, E) are arranged to display the progressive variations in the cutaneous distribution of the anterior tibial nerve.

In these types connecting loops between the nerves have been in some cases omitted, as the information necessary was not sufficiently complete.

The figures attached to the types indicate the numbers of such specimens out of the total of 229 examined. In some cases the percentage is also given.

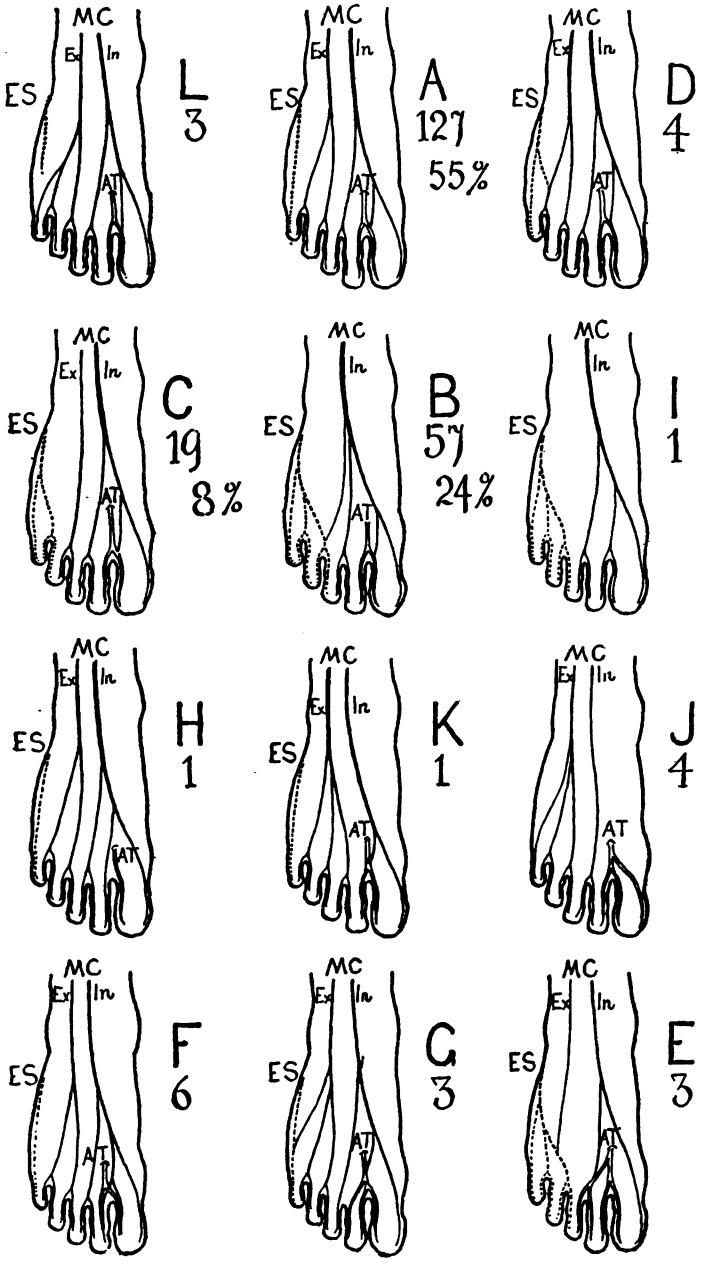
The musculo-cutaneous is represented by a solid black line; the external saphenous by a dotted line. The anterior tibial by a double outline.

The so-called normal arrangement represented by type A occurs in 55 per cent. of cases. Next in order is type B, where the external saphenous supplies the two and a half outer toes. This distribution of the nerves was met with in 24 per cent.-of the feet examined. For further details the reader is referred to Table V.

In one case, recorded by Mr J. W. Smith of The Owens College, the internal saphenous supplied the inner side of the great toe; in another, it reached the inner side of the head of the metatarsal bone.

[TABLE V.

TABLE V.—*Variations in the Distribution of the Cutaneous Nerves on the Dorsum of the Foot. Number of Feet examined,* 229.



QUESTION V.

In answer to the question, as to the occurrence of the diverticulum ilei, replies have been received from—

Messrs H. Hunter, Trinity College, Dublin; A. Robinson, Owens College, Manchester; ——— ———, St Mary's Hospital, London; F. H. Marson, Queen's College, Birmingham; Gordon Brodie, Middlesex Hospital, London; H. L. Sutherland, University of Aberdeen; W. Thelwall Thomas, University College, Liverpool; P. Macleod Yearsley, Westminster Hospital; P. R. W. Santi, School of Medicine, Newcastle-on-Tyne; J. Symington, Minto House, Edinburgh; A. Blaney, Catholic University Medical School, Dublin; J. H. Teacher, University of Glasgow; J. Musgrove, University of Edinburgh; H. D. Rolleston, St George's Hospital; A. Thomson, University of Oxford. Misses Piercy and Bale, London School of Medicine for Women.

Out of a total of 769 subjects examined the presence of Meckel's diverticulum has been noted sixteen times, or slightly over 2 per cent. Subjoined are the descriptions of the various examples noted.

Mr H. HUNTER, of Trinity College, Dublin, describes a case as follows:—The subject was an adult male, who suffered from a large femoral hernia on the left side. The diverticulum, with the greater part of the ileum and much of the sigmoid flexure of the colon, formed contents of the hernia.

The distance of the diverticulum from the ileo-cæcal valve was 49 inches; it sprang from the anterior aspect of the gut, close to its mesenteric attachment. Its length was $1\frac{5}{8}$ inch when inflated, and its diameter about $\frac{1}{2}$ an inch, but towards its lower end it expanded suddenly into a hammer-shaped extremity, whose largest diameter was $1\frac{1}{4}$ inch. The diverticulum had no connection at its extremity with the umbilicus or other part, nor was there any trace of such.

The next case is recorded by Mr F. H. Marson of Queen's College, Birmingham. The diverticulum was situated 34 inches from the cæcum, was $2\frac{1}{8}$ inches in length and $3\frac{3}{4}$ inches in diameter.

Mr SUTHERLAND, of Aberdeen University, records another case, but is unable to furnish further details.

Mr THELWALL THOMAS, of University College, Liverpool, describes a case which came under his observation. The diverticulum was situated 36 inches from the ileo-cæcal valve, was $2\frac{1}{2}$ inches long, and was adherent to the mesentery by a slight double fold of peritoneum, which was attached to the diverticulum for half its length, the tip of the diverticulum being rounded and free.

Dr SYMINGTON, of Edinburgh, sends notes of a case in which the diverticulum was situated 56 inches from the ileo-cæcal valve, was

TABLE VI.—*Details regarding the Cases of Meckel's Diverticulum recorded.*

		Sex.	Age.	Distance of Diverticulum from Cæcum.	Character of Diverticulum.	Relation to Mesentery.
Mr H. D. Rolleston's Cases, . .	1	Male.	6 weeks.	11 inches.	Cul-de-sac ½ inch long; same lumen as bowel.	Lying in mesentery.
,, ,, . .	2	Male.	3 years.	26 inches.	Cul-de-sac dilated at end.	Free, not attached to mesentery.
,, ,, . .	3	Male.	16 years.	66 inches.	Cul-de-sac.	Lying-in mesentery.
,, ,, . .	4	Male.	21 years.	25 inches.	Cul-de-sac 2 inches long; lumen same as bowel.	Not recorded.
,, ,, . .	5	Male.	34 years.	31 inches.	Cul-de-sac 3 inches long; lumen equal ileum.	Not recorded.
,, ,, . .	6	Male.	37 years.	35 inches.	Cul-de-sac, lumen of ileum with fibrous cord from fundus, which has become adherent to ileum 2½ inches off, thus forming an arch.	Away from mesentery.
,, ,, . .	7	Male.	42 years.	70 inches.	Cul-de-sac lumen of bowel.	Lying-in mesentery.
,, ,, . .	8	Female.	74 years.	34 inches.	Cul-de-sac lumen of bowel.	Not recorded.
,, ,, . .	9	Male.	75 years.	120 inches.	Cul-de-sac 3 inches long; lumen of bowel.	In mesentery.
,, ,, . .	10	Male.	80 years.	48 inches.	Cul-de-sac 3½ inches long; end dilated; walls of extremely thickenened.	Away from mesentery.
Mr W. Hunter's Case, . . .	11	Male.	Adult.	49 inches.	1⅛ inch long; diameter ⅛ inch thick; hammer-shaped extremity.	Free.
Mr F. H. Marson's Case, . .	12	Not recorded.	Not recorded.	34 inches.	2½ inches long, 3¾ inches in diameter.	Not recorded.
Mr H. Sutherland's Case, . .	13				No details given.	
Mr Thelwall Thomas' Case, . .	14	Not recorded.	Not recorded.	36 inches.	2½ inches long; extremity rounded and free.	Adherent to the mesentery by a double fold of peritoneum for about half its length.
Dr Symington's Case, . . .	15	Not recorded.	Not recorded.	56 inches.	2½ inches long, 3 inches in circumference; pointed at one side of its extremity.	Free.
Mr J. H. Teacher's Case, . .	16	Not recorded.	Not recorded.	49 inches.	1 inch long.	Free.

Total number of subjects examined, 769.

2½ inches long and 3 inches in circumference. The diverticulum was quite free, and somewhat pointed at one side of its extremity.

Mr J. H. TEACHER mentions a case where the diverticulum was situated 49 inches from the ileo-cæcal valve, and measured about 1 inch in length; it was perfectly free.

A very valuable addition to the returns relating to this question has been made by Mr H. D. ROLLESTON of St George's Hospital, who has sent in a record of 337 subjects, which he examined in the post-mortem room of that hospital. He has tabulated the details of ten instances of this condition which he met with, and the aforementioned cases have been included, so as to make the table as complete as possible.

In a note appended to his report Mr Rolleston draws attention to the fact that nine out of the ten subjects in which this anomaly existed were males, a fact which he says cannot be accounted for by the supposition that more examinations were made in males than in females, for as a matter of fact there was not much difference in the number of males and females examined. He further adds that there was nothing to suggest that the formation of the pouch was due to traumatism, such as partial strangulation, &c., and in no case was the diverticulum attached to the umbilicus, though in one case (No. 6) there was a fibrous cord, which might have been broken away from the umbilicus and subsequently contracted fresh adhesions.

In conclusion, the Committee desire to place on record their thanks to all those gentlemen by whose co-operation they have been enabled to publish the present Report.

The Secretary will be pleased at all times to receive any suggestions in regard to this or allied matters. Communications to be addressed to him at the Anatomical Department, Museum, Oxford.