Clinical pocket-book : an aid to the study of clinical medicine for the use of students of the Manchester Royal Infirmary.

CLINICAL MEDICINE

CLINICAL POCKET-BOOK

AN AID TO

THE STUDY OF CLINICAL MEDICINE

FOR THE USE OF STUDENTS OF THE

Manchester Royal Infirmary

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PREFACE.

THE OBJECT of this little work is to assist Students in the practical study of disease at the bed-side. It is drawn up in the briefest terms, in order that every Student may make himself, with ease, thoroughly acquainted with its entire contents. Its special purpose is to facilitate the conduct of the Medical Clinical Class—to economise the time of teacher and pupils, and to give uniformity and precision to the instruction.

W. R.

MANCHESTER ROYAL INFIRMARY:
October 1874.

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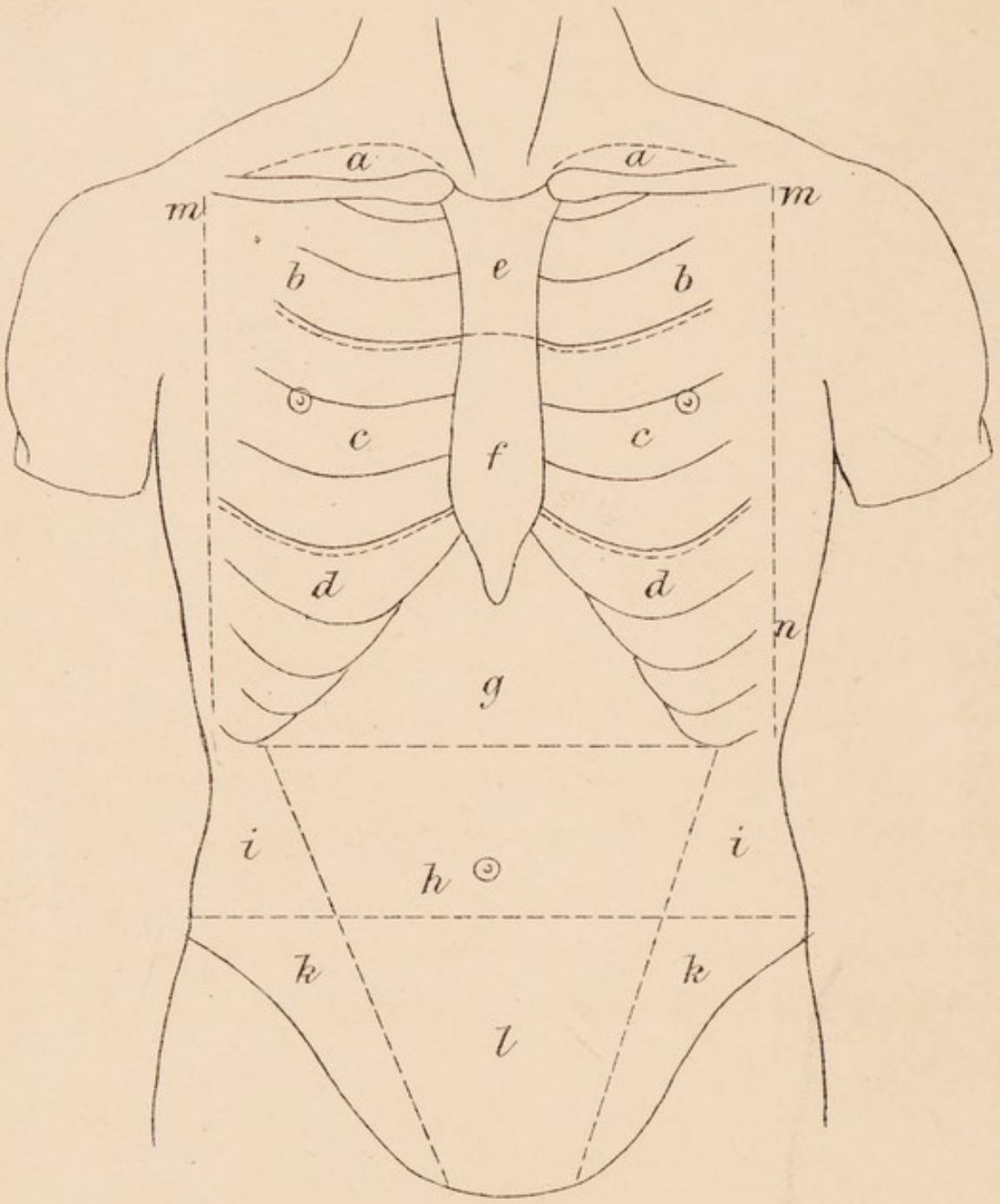


CLINICAL REGIONS

On the front of the Body.

CLINICAL POCKET-BOOK.

SECTION I.

CLINICAL TOPOGRAPHY OF THE CHEST AND ABDOMEN.

A KNOWLEDGE of the normal position and limits of the principal organs in the chest and abdomen, both in reference to each other and to the surface of the body, is essentially necessary to the student of clinical medicine.

To facilitate description and reference, the trunk has been mapped out into the following 'clinical' regions.

ANTERIOR REGIONS. (PLATE I.)

1. **Supra-clavicular**—*a*, *a*.—Above the clavicle.

2. **Clavicular.**—Corresponding to the inner two-thirds of the clavicle.

3. **Infra-clavicular**—*b*, *b*.—From the clavicle to the third rib. The upper outer corner of this region (*m*) is called the *acromial angle.*

4. **Mammary**—*c*, *c*.—From the third rib to the sixth rib.

5. **Infra-mammary**—*d*, *d*.—From the sixth rib to the costal margin.

The infra-clavicular, mammary, and infra-mammary regions are bounded internally by the edge of the sternum, and externally by a line—*m n*—falling vertically from the acromial angle. This is called the *acromial line.*

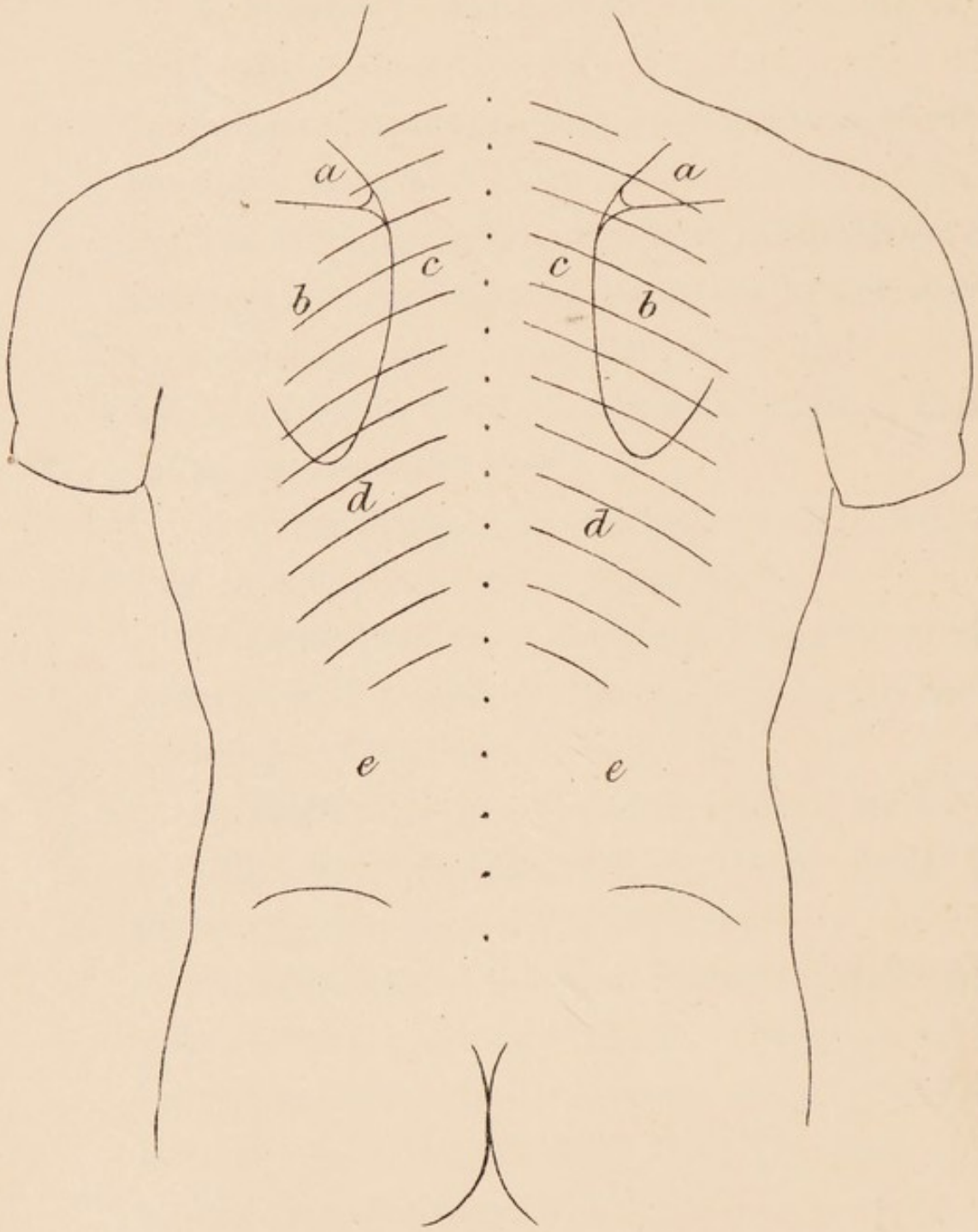
6. **Upper Sternal**—*e*.—Corresponding to the sternum as low as the level of the third rib.

7. **Lower Sternal**—*f*.—Corresponding to the sternum from the level of the third rib to the base of the ensiform cartilage.

8. **Epigastric**—*g*.—Bounded laterally by the diverging costal margins, and inferiorly by a line connecting the bend of the tenth ribs.

9. **Umbilical**—*h*.—Bounded above by the inferior limit of the epigastric region, below by a line connecting the anterior superior spines of the ilia, laterally by a line running from the bend of the tenth ribs to the pubes.

10. **Lumbar**—*i*, *i*.—Bounded above by the costal margins, below by the crests of the ilia, internally by the outward limits of the umbilical region. This region consists of an anterior and posterior part, the latter of which reaches to the spine.



CLINICAL RECIONS.

On the back of the Body.

11. **Iliac**—*k*, *k*.—Corresponds to the iliac fossa.

12. **Hypogastric and Pubic.**—Bounded below by the pubes, and superiorly and laterally by the limits of the umbilical and iliac regions.

The *nipple line* and the right and left *edge of the sternum* are vertical lines often referred to, and of which the names sufficiently indicate the position.

Lateral Regions.

The lateral regions are bounded in front by the acromial lines, and behind by the anterior borders of the scapulæ.

1. **Axillary.**—Extends from the arm-pit above to the sixth rib below.

2. **Infra-axillary.**—From the sixth rib above to the margin of the thorax below.

Through the centre of this region runs vertically the *mid-axillary line.*

Posterior Regions. (Plate II.)

1. **Supra-spinous**—*a*, *a*.—Corresponds to the supra-spinous fossa.

2. **Infra-spinous**—*b*, *b*.—Corresponds to the infra-spinous fossa.

3. **Inter-scapular**—*c*, *c*.—Extends from the posterior border of the scapula to the vertebral column.

4. **Infra-scapular**—*d*, *d*.—From the angle of the scapula to the lower limits of the thorax.

5. **Lumbar**—*e*, *e*.—Posterior part—from the lower margin of the thorax to the crest of the ilium.

The Position and Boundaries of the chief Organs in the Chest and Abdomen in the Normal State.

The accompanying diagrams—Plates III. and IV.—give an accurate representation of the usual position and boundaries of the lungs, the heart, the liver, the spleen, and the kidneys, in reference to the anterior and posterior surfaces of the body, in adult males. Considerable variations, however, occur, independently of disease, from diversity of age, sex, and general conformation, for which allowances must be made in using the diagrams. They are to be regarded as mean types of reference, and not as rigid standards of measurements.

In young children the organs in the chest are generally at a higher level, and the liver (especially the left lobe) is more voluminous than in adults. In the female the chest is generally narrower and the lower part of the abdomen relatively wider than in the male. The general conformation of the individual must also be taken into account. For example, in broad-chested persons the transverse measurements

—and in long-chested persons the vertical measurements—are relatively greater than in the diagrams. Allowances must be made for pigeon-breasted and ricketty persons, and for certain (so-called) physiological bulgings and sinkings-in of the framework of the thorax, which can be best pointed out and appreciated at the bed-side.

Keeping in mind these precautions, the student will derive much instruction from the study of these diagrams. A correct, though fluent, ideal of the normal size and position of the organs will gradually form in his mind, which will serve as a standard of comparison when he comes to appreciate the deviations produced by disease.

The following are the most important particulars to fix in the memory in regard to the position and limits of the thoracic and abdominal organs.

Lungs.—Their outlines are indicated by the blue lines in Plates III. and IV.

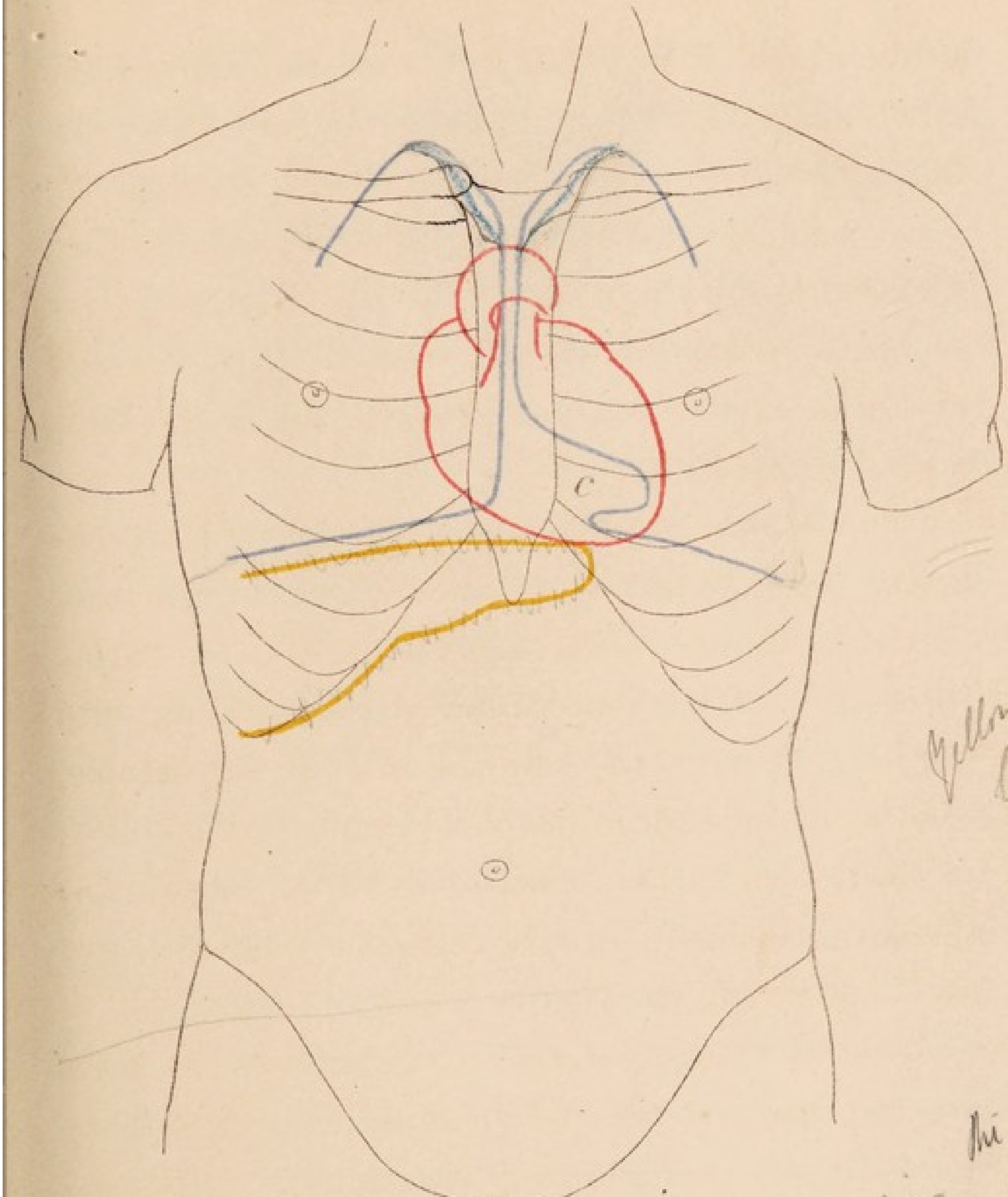
The *apices* rise about a finger's-breadth above the clavicles—the right usually a little higher than the left. The *inner borders* of the two lungs meet in the middle line behind the first piece of the sternum, and continue in close proximity as low as the level of the fourth interspace. Here the border of the *left* lung turns outwards and downwards, uncovering a portion of the heart (superficial

cardiac area, Plate III. *c*). Near the apex of the heart this border turns inward again for a short distance, forming a sort of tongue, which overlaps the lower part of the heart; finally, turning outward again with a sharp curve, it follows the direction of the sixth cartilage into the infra-axillary region, and crosses the mid-axillary line about the level of the eighth rib.

The corresponding border of the *right* lung continues its vertical course as low as near the base of the ensiform cartilage. Here it turns sharply outwards and slightly downwards, coinciding with the sixth rib in the vertical line of the nipple, and with the eighth rib in the mid-axillary line.

In the back, the lower borders of the lungs lie at the level of the eleventh ribs—the left usually a little lower than the right.

Heart.—The deep (real) boundaries of the heart are indicated by the red lines in Plate III. They can only be approximately determined by percussion, owing to the overlapping of the lungs. The *superficial cardiac area* (that portion of the heart's surface which is uncovered by lung, Plate III. *c*) is of much greater clinical importance. It can be defined with accuracy by percussion. This area, as measured on the subject, extends about three inches from the mid-sternum to the apex of the



POSITION OF THE ORGANS

On the front of the Body.

Yellow line to be left out

Coloured lines to be put on the red & blue only
many fine dotted lines
— drawing to be reduced to
1/2 size or thereby
Black lines to be made a
little Bolder

heart, and about two inches from above downwards; but as measured by percussion on the living body, it is usually only about two inches in length, and about an inch and half in depth.

The apex of the heart is generally seen and felt to beat in the fifth interspace, from half an inch to an inch within the nipple line.

The lower border of the heart cannot be directly defined by percussion, because it lies on the left lobe of the liver—only separated therefrom by the diaphragm. The position of this border is indirectly determined by drawing a line along the level of the lower border of the right lung in front and producing it to the apex of the heart.

Liver.—The boundaries of the liver are indicated by the yellow lines in Plates III. and IV. The upper margin is overlapped by lung to the depth of about an inch in the infra-mammary region.* The upper limit of liver-dulness coincides with the lower margin of the right lung, and this, in the nipple line, lies at the level of the sixth rib; and in the mid-axillary line, at the level of the eighth rib. The upper border of the liver is very constant in its situation in healthy persons.

The lower border, on the contrary, is very in-

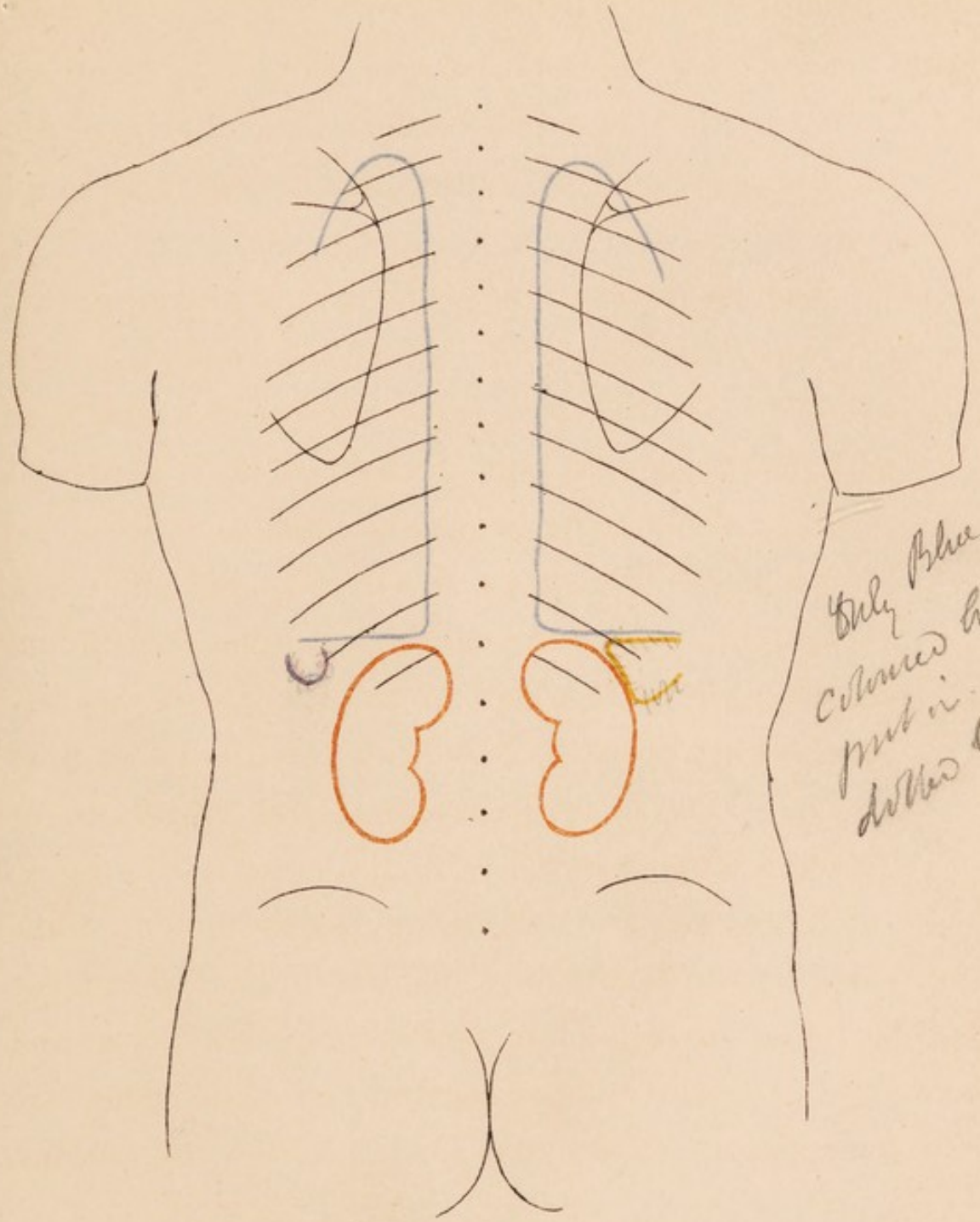
* The *real* upper margin of the liver is therefore higher by about the breadth of an interspace than is represented in the diagram.

constant both in situation and form. The left lobe projects into the epigastrium from one to three inches beyond the costal border. The lower margin of the right lobe generally coincides with the costal border.

The liver rises and falls with the movements of the diaphragm; it is pushed up when the abdomen is distended with ascites, a tumour, or with flatulence; on the other hand, it is depressed in emphysema and right pleuritic effusion.

Spleen.—The spleen lies deep in the left hypochondrium, and corresponds to the ninth, tenth, and eleventh ribs. It varies greatly in size in healthy persons; its position is indicated by the violet lines in Plate IV. It is often so small as scarcely to be detected by percussion.

Kidneys.—The outlines of the kidneys are indicated by the brown lines in Plate IV. The kidneys lie close to the spine, opposite the last dorsal and the two or three upper lumbar vertebræ. They are very constant in size and position in healthy persons.



POSITION OF THE ORGANS

On the back of the Body.

SECTION II.

THE METHODICAL EXAMINATION OF A PATIENT.

It is important that the student should thoroughly master some good method of examining a patient, so as to elicit all the signs, symptoms, and relevant antecedents of the disease.

The following method is especially adapted for the conduct of such an examination in clinical class, but it is also adapted, with suitable variations, for the examination of private patients.

The proceeding divides itself naturally into three parts:—

A. Preliminary observations and enquiries.

B. Detailed examination of the several organs and systems of the body.

C. Previous history.

It is found in practice more convenient in conducting a clinical class to examine into the antecedents of a patient after, instead of before, investigating the signs and symptoms, because the path of the enquiry is then more direct and plain, and questions can be put with more precision and with greater prospect of eliciting pertinent replies.

A.—PRELIMINARY OBSERVATIONS AND ENQUIRIES.

The patient should, if possible, be lying in bed and stripped. The student first proceeds to observe the general appearance of the patient, and to note any morbid signs which may be revealed on a general inspection of the body; beginning with the countenance and neck, and travelling down to the trunk and extremities. He then looks at the tongue, counts the pulse and respirations, cursorily examines the urine, sputa, and vomited matters (if there be any), and notes the temperature in the axilla.*

The following are the principal points to observe in this preliminary survey.

1. Inspection of the Patient.—*a.* **Posture.**—Observe if the patient lies nearly flat in bed in the usual way, or with the shoulders unduly raised, or sitting up to assist his breathing (orthopnœa), or lies on either side or in some cramped and unnatural position.

b. **Nutrition.**—Observe if the patient appear well nourished, stout, spare or emaciated; whether he has a healthy look or a cachectic appearance.

* In order to save the time of the class, the thermometer should be placed in the axilla at the commencement of the examination; and while the examining student is counting the pulse, a second student should count the respirations, and a third student should examine the urine.

c. **Face.**—Observe if the countenance be calm and natural, or anxious and suffering—whether pale, anæmic, sallow, flushed, puffy, bloated, stupid-looking, drawn, distorted—if there be lividity of the lips, alæ of nose, or malar protuberances—if the conjunctivæ be pallid, pearly, œdematous, jaundiced, or blood-shot—if the eyelids be swollen, incapable of being closed or opened—if the eyeballs are parallel or divergent, and their pupils normal, &c.

d. **Neck.**—Observe if there be fulness at the root of the neck, swollen veins, or pulsation—if the sterno-mastoid muscles contract in quiet respiration—if there be swelled cervical glands, &c.

e. **Skin and surface generally.**—Observe if the skin be moist or dry, or sweating, smooth or rough, unnaturally pale, jaundiced, or discoloured—if there be any eruptions or sores—if there be any anasarca of the trunk or limbs—any enlargement of the superficial veins—any bulging, tumour, enlargement, rigidity, or contraction of any part—if the abdomen be tumid or flattened—if there be any choreal or convulsive movements, or any paralysis or atrophy—if the finger-ends be clubbed.

2. Tongue and Mouth.—Observe the mode of protrusion of the tongue—whether it be moist or dry, or dryish (*i.e.* becoming dry on a short exposure), clean, or coated with a white, brown, or black fur—

whether furrowed, mapped or indented at the edges—whether it be unnaturally red or denuded of epithelium. Observe also the condition of the papillæ and the state of the gums, teeth, roof of mouth, and fauces.

3. PULSE.—Observe its rate by watch—its character, whether regular or irregular in force or rhythm—if the beats be distinct and steady, or running confusedly into each other—if the strokes are weak and compressible, or small and thready, or full and bounding.

4. RESPIRATIONS.—Observe their number by watch—their regularity—their character, whether easy or laboured, or panting (dyspnœa), whether unduly thoracic or diaphragmatic, whether or not the extrinsic muscles of respiration are called into action in ordinary breathing.

Calculate the pulse-respiration ratio. The ordinary ratio is one respiration to every four or four and a half beats of the pulse.

5. URINE.—Make a cursory examination of the urine. Observe its colour, reaction, specific gravity—examine for albumen—note the existence of a deposit, its colour and character, whether crystalline or amorphous.

6. EXPECTORATION.—If there be any sputum, observe if it be abundant or scanty—its character, whether mucous, viscid, tenaceous, glairy, like white of egg, or frothy—if it contain pus, either alone (or

nearly alone) or mixed with mucus, or in nummular masses—if it contain blood, either intimately mixed with mucus, constituting the 'rusty sputum,' or in streaks or clots or large quantity—note whether the blood be dark, or bright, or frothy. Observe also if the sputum be tinged with bile, or contain fragments of food or other foreign ingredients.

7. Vomited Matters.—Note the occurrence of vomited matters, and their general appearance to the naked eye.

8. Temperature.—Take the thermometer from the arm-pit, and read out the temperature.

The mean normal temperature in the axilla is 98·5 Fahr. It ranges in health from 98·3 to 99—being somewhat higher in the evening than in the morning. In children this is reversed. If the temperature range persistently above 99°, it indicates some degree of pyrexia. Febrile temperatures usually range from 100° to 104°, but may mount up to 106°, 108°, and even 112°. These latter high figures are rarely found, except in the final hours of fatal cases.

This completes the preliminary examination. It will in all likelihood have supplied the student with a hint as to the probable seat and nature of the disease. If not, he puts a question to the patient—he asks him what is the matter with him, or if he

has any pain anywhere. In one of these ways the student gets a clue, which enables him to make up his mind where to begin his more detailed examination of the case. He then proceeds to elicit the physical signs and symptoms of disease in the several organs and systems in the order which appear to him most likely to lead the soonest to a satisfactory diagnosis of the case.

Thus—

If he find—Orthopnœa, general anasarca, distended jugular veins, he begins with the Heart.

If he find—Purulent expectoration, emaciation, and clubbed finger ends, he begins with the Lungs.

If he find—Albuminous urine, pale puffy countenance, he begins with the Kidneys.

If he find—Jaundice, and a protuberant abdomen, he begins with the Liver.

If he find—Paralysis, or convulsive twitches, he begins with the nervous system.

And so forth.

It will seldom be found necessary to pursue the examination in detail through the entire series of organs and systems .As a rule, it is only necessary to proceed until sufficient information has been obtained to warrant a satisfactory diagnosis of the case. When this point has been reached, the remaining organs need only be subjected to a cursory examination.

B.—DETAILED EXAMINATION OF THE SEVERAL ORGANS AND SYSTEMS.

The following are the most important points to be attended to.

1. The Respiratory Organs.

Observe the state of the nares, changes in the voice, character and frequency of cough, if there be any.

Lungs.—In examining the lungs, it is important to compare the two sides, inasmuch as the most significant information is generally elicited from observation of the differences between the two sides. Accordingly, it is usual to examine the corresponding regions on the right and left sides in immediate succession, so as to bring out as sharply as possible the contrast between them. The front of the chest is examined first, and then the sides and back.

Inspection, Mensuration, and Application of the Hand.—Observe if the general conformation of the chest be good, and symmetrical on the two sides—if there be any flattening under the clavicles, and on which side this is more pronounced—if there be any bulging or retraction of either side.

Observe if the respiratory movements are normal or defective; if they are equal on the two

sides, especially in the infra-clavicular regions. Slight differences can be best appreciated by causing the patient to breathe deeply, and placing the hands on the regions compared.

Percussion.—Compare the resonance of the several regions of the chest, on the two sides in succession, beginning above and proceeding downwards. If there be dulness of any part, ascertain its extent and degree. Mark also the quality of the percussion note—whether it be the normal pulmonary note, or short and high-pitched (as in tubercular deposit), or hard and wooden (as in pneumonic consolidation and pleuritic effusion), or metallic or 'cracked-pot' (as over a vomica), or ultra-resonant and tympanitic (as in pneumo-thorax and emphysema).

When there is diminished resonance, there is also an increased *sense of resistance* on percussion.

Vocal Fremitus. — This is usually increased if there be dulness from pulmonary consolidation; but diminished or abolished if the dulness be due to pleuritic effusion or intra-thoracic tumour.

Auscultation.—Ascertain, first, if the respiratory sounds be normal, or if they be defective in amount, or altered in character—exaggerated, harsh, blowing, tubular, hollow, or amphoric—if expiration be soft and silent, or loud and prolonged—if inspiration be even or divided.

Next ascertain if there be any adventitious sounds (râles, or friction sounds). The most common of these are:—*Sibilant* and *sonorous* râles (in bronchitis); *crepitant* râles or *crepitation*, dry or moist (in tubercular softening); *large crepitant* and liquid or mucous râles (in bronchitis and phthisis); *fine crepitation* (in pneumonia, capillary bronchitis, and pulmonary œdema); *gurgling* râles (in vomicæ containing fluid); *friction sounds* (in pleurisy).

Râles and friction sounds are made more audible by causing the patient to breathe deeply or to cough; sometimes these sounds are audible only on deep inspiration.

Vocal resonance follows the same rules as vocal fremitus—i.e. it is intensified in consolidation of the lung, and diminished or abolished in pleuritic effusion or intra-thoracic tumour. If there be suspicion of vomica, the existence of *whispering* pectoriloquy should be tested.

Symptoms.—Enquire respecting the actual or past existence of the following symptoms: *Shortness of breath*, either in rest or exercise, continuous or paroxysmal; *cough* and *expectoration*, character of expectoration; *hæmoptysis*, its quantity and recurrence; *pains* about the chest, their character and recurrence.

2. The Heart and Great Vessels.

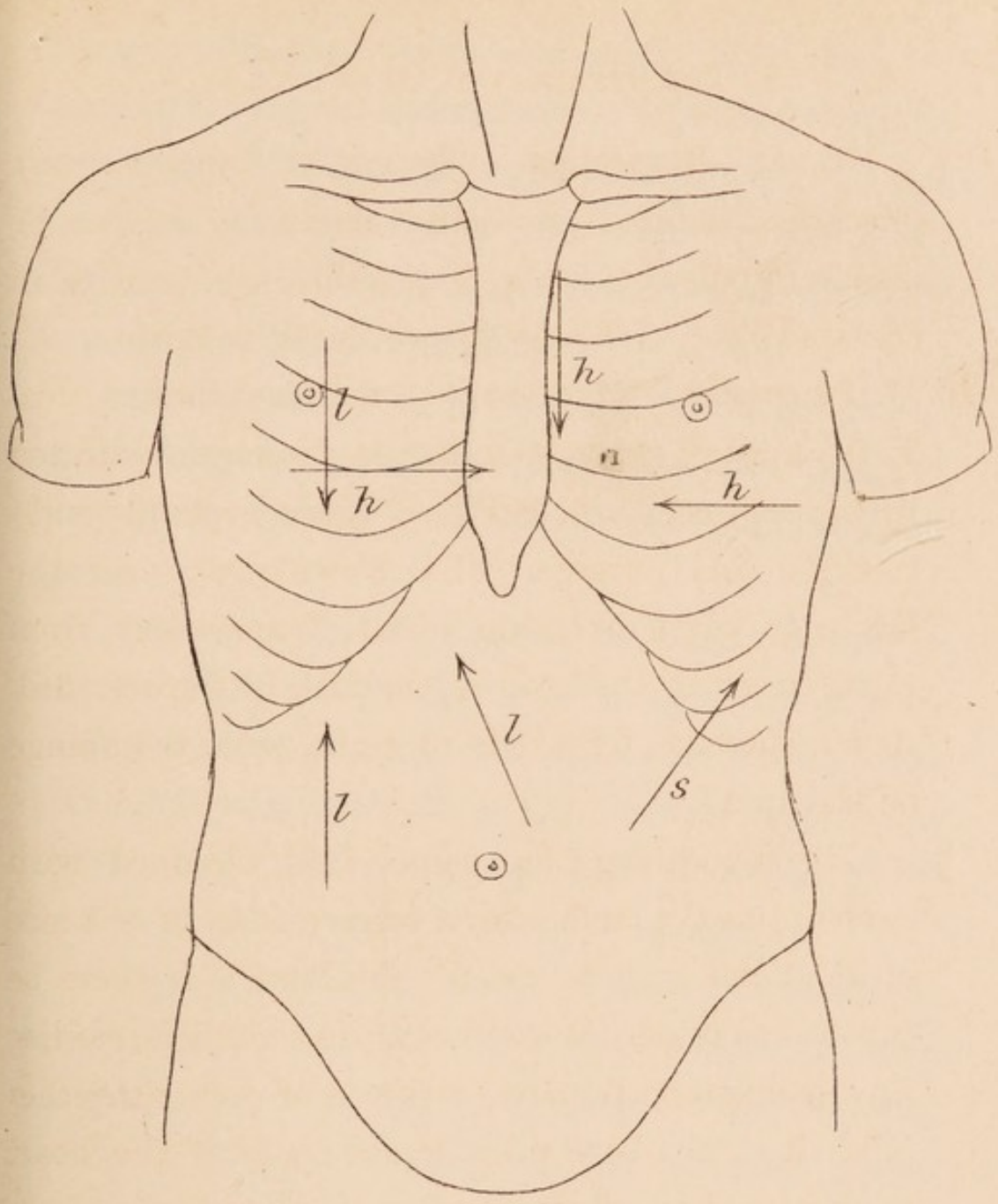
Heart.—**Inspection.**—Observe if there be any præcordial bulging; note the extent of the heart's visible impulse; then fix, if possible, the position of the apex-beat, either by inspection or palpation.

Percussion.—Map out the superficial cardiac area. Three lines of percussion, in the direction indicated by the arrows *h*, *h*, *h*, in Plate V., are generally sufficient for this purpose. 1st. Downwards, near the left edge of the sternum. 2nd. Transversely, from right to left at the level of the fifth interspace. 3rd. Also transverse, from left to right, so as to impinge on the apex.

By connecting the points thus obtained with curved lines, a sufficiently correct idea of the size of the heart may be usually obtained. If there be much emphysema of the lungs, the superficial cardiac area is disproportionately lessened or even altogether effaced. The above rules do not apply if the heart be displaced by pleuritic effusion, or if the pericardium be distended with fluid.

When the heart is enlarged, its apex beats at or outside the nipple line, generally at a lower level than in the normal state, and the superficial cardiac area is increased in extent.

In Pericardial Effusion, a pear-shaped area of



The arrows indicate the lines of percussion to determine the limits of the heart (h.h.h.) of the liver (l.l.l.) and of the spleen (s.)

dulness, with base below and apex above, will be found in the sternal and mammary regions, extending more to the left than the right of the sternum. As a rule, a clear percussion note over the third left cartilage contraindicates the existence of clinically important pericardial effusion.

Auscultation.—The stethoscope should be placed on the following points in succession—the apex, the body of the ventricle, the base of the heart, and the aorta.

Observe, in the first place, the heart's sounds—whether they be normal in tone and strength, or weak and defective—whether the action of the heart be steady and regular, or if the beats be irregular in rhythm and force, or run confusedly into each other, or follow each other with an ambling rhythm.

In the second place, observe if there be any adventitious sounds—murmurs or friction sounds. If there be murmurs, note their *coincidence* with the first or second sound of the heart; note also their points of *maximum intensity*, whether at the apex or base, and in what direction they are best *conducted*, whether towards the axilla, into the aorta, or towards the ensiform cartilage.

The four chief endocardial murmurs are thus distinguished from each other, and have the following significance:—

1. **Mitral Systolic** (Mitral Regurgitant).—Maximum intensity at left apex; conducted strongly to axilla, feebly up aorta; signifies insufficiency of mitral valve and regurgitation of blood into left auricle.

2. **Mitral Diastolic**, or **Pre-systolic** (Mitral Obstructive).—Maximum intensity at left apex; conducted well to axilla, feebly or not at all up aorta; signifies constriction of the mitral orifice.

3. **Aortic Systolic** (Aortic Obstructive).—Maximum intensity at base of heart; conducted strongly up aorta, feebly or not at all towards axilla; signifies constriction of the aortic orifice.

4. **Aortic Diastolic** (Aortic Regurgitant).—Maximum intensity at base of heart; conducted best downwards towards ensiform cartilage, feebly up aorta, and not at all towards axilla; signifies insufficiency of aortic valves, and regurgitation of blood into left ventricle.

Inorganic murmurs are generally due to spanæmia, or excited cardiac action. They are distinguished from organic murmurs by their soft, faint character, and the absence of other signs of heart disease. Spanæmic murmurs are heard loudest over the left second interspace, and are often accompanied by a venous hum in the neck.

Pericardial friction sounds are distinguished from endocardial murmurs by their superficial character,

their rubbing or creaking quality, their to-and-fro rhythm, and their non-conduction beyond the heart's limits.

The Great Vessels.—Observe if there be any bulging, or expansile pulsation along the sternum or adjacent parts, any loss of resonance over the mediastinum, any murmur which is heard loudest in the upper sternal region; observe if there be any inequality of the pulses or of the pupils; any signs of concentric pressure, such as metallic or raucous quality of voice or cough, dysphagia or dyspnœa, or pains about the upper part of the chest.

Symptoms.—Enquire respecting past or present attacks of articular rheumatism, dyspnœa, palpitation, cough, hæmoptysis, dropsical effusion, syncopal seizures, angina pectoris, &c.

3. Digestive Organs.

The tongue, mouth, and fauces having been already looked at, the student proceeds to make a physical examination of the abdomen.

Abdomen.—Observe if the abdomen be normal in form, size, and softness, or if partially or generally enlarged; if any tumour, nodule, or induration can be felt in any part.

If the abdomen be generally enlarged (especially

if the sides are bulged out), the presence or absence of peritoneal effusion (ascites) must be ascertained. The signs of ascites are dulness in the flanks, and tympanitic note above the umbilicus.* By changing the position of the patient first on the one side and then on the other, it will be found, if there be ascites, that the upper side will always yield a clear note, and the lower side always a dull note. In the case of tumours or cysts in the abdomen, the limits of dulness are not altered by altering the position of the patient, and the flanks, one or both, are usually tympanitic on percussion. If a tumour be felt in the abdomen, its outlines should be traced by palpation and percussion, and an endeavour should be made to ascertain its connection with one or other of the abdominal organs—the liver, spleen, pancreas, stomach, uterus, ovaries, intestines, bladder, or kidneys. The position of the bowel in regard to it should be noted, whether in front or behind. It should also be ascertained whether it be fixed or movable, and whether or not it rises and falls with the diaphragm in deep breathing.

Liver.—Define the limits of the liver by percussion. It is generally sufficient to do this along the three lines indicated by the arrows *l*, *l*, *l*, in Plate V.

* When ascites is very great, the whole front of the abdomen will be dull as high as the epigastrium.

The very lightest percussion possible should be practised—especially in defining the lower limits.

If a portion of the liver project beyond the costal margin, it should be carefully examined by the hand, to ascertain if it be soft and yielding, as in health, or hard, resistant, or nodular—if the margin be thin and bevelled, or thick, rounded, and irregular.

In persons with a lax abdomen the limits of an enlarged liver can often be more correctly estimated by palpation than percussion. This is especially the case when, as not unfrequently happens, the organ is partially overlapped by bowel.

When the liver is enlarged, it encroaches on the epigastric, umbilical, and right lumbar regions; it descends in front of the intestines (save partially in exceptional cases), and it rises and falls with the diaphragm in deep breathing.

When signs of diseased liver are found, enquire respecting the occurrence of jaundice, biliary colic, and passage of gall-stones, hæmatemesis, retching and vomiting, melæna, piles, and especially the abuse of alcoholic stimulants.

Spleen.—Ascertain the limits of the spleen by percussion. As a rule, it is sufficient to carry out a single line of percussion in the direction of the arrow *s*, Plate V. If a tympanitic note be found along this line in the left hypochondrium, it contraindicates

the existence of any clinically important enlargement of the spleen.

The limits of an enlarged spleen can generally be more exactly traced by palpation than by percussion. The border is usually irregular and deeply notched. An enlarged spleen descends in front of the intestines; it emerges from under the left costal margin, and encroaches on the left lumbar and umbilical regions. It rises and falls with the diaphragm in deep respiration.

When the spleen is enlarged, the blood should be examined microscopically, and enquiries should be made about epistaxis, remittent and intermittent fever, and use of alcoholic stimulants, and residence in tropical or malarious countries.

The Stomach.—Ascertain if it be distended or empty. If there be any nodule or hardness, especially about the pylorus. Enquire if there be any pain—its character, exact site, recurrent or continuous, its relation to the times of taking food, and whether it is felt in the back.

Enquire if there be any *vomiting*—how often it recurs, its relation to taking food or drink. The vomited matters should be examined with the naked eye and the microscope. Search should especially be made for blood, pus, and sarcinæ.

The Intestines.—Search for any nodule or hard-

ness. Observe if they are distended with flatus or not—if there be much rumbling of flatus—if there be pain or tenderness on pressure, in any part—if they are loaded with fæces. Enquire about the action of the bowels—diarrhœa or constipation—the character of the *stools*, if they contain blood or pus or other foreign matter. If necessary, they should be seen and examined both with the naked eye and the microscope. Enquire if defecation be attended with pain or straining—if there be hæmorrhoids. If necessary, the rectum should be examined digitally and with the bougie.

4. Urinary Organs.

The Kidneys.—In the normal state the kidneys yield no distinct physical signs, but in rare cases they partly break loose from their attachments, and one or both can be felt as small tumours floating among the intestines.

Renal Tumour.—When the kidney is enlarged or gives rise to a morbid growth, the tumour so constituted comes forward in the anterior lumbar and umbilical regions—the intestine lies in front of it—it is fixed in its position, not rising or falling with the movements of the diaphragm.

The Urine.—Observe its quantity, colour, odour, clearness or turbidity, reaction, specific gravity; test

for albumen and sugar. If there be a deposit, it should be examined microscopically, to ascertain the presence or absence of epithelium, pus, blood, casts of the uriniferous tubes—their character, number, and variety—fatty particles, renal cells, inorganic deposits, such as amorphous lithates, amorphous phosphates, crystals of uric acid, oxalate of lime, triple phosphates, &c.

The Bladder and Urethra.—These organs require to be examined by the catheter and sound, the use of which falls to the province of the surgeon. When the bladder is distended with urine, it forms a soft elastic oval tumour in the abdomen, rising towards the umbilicus.

5. Nervous System.

Brain.—Enquire if there be any headache—its character, locality, recurrence—any loss of sleep, giddiness, delusions, impaired consciousness, stupor, coma, insensibility, delirium, violence, involuntary weeping or laughter, loss of memory of words, aphasia, embarrassed articulation, &c.

Pain is a symptom of great importance, and should be especially attended to. Enquire into its character—whether aching, throbbing, pricking, stabbing, grinding, &c.—whether localised or diffused. Its seat should be exactly defined, and always, if possible, seen

and manually examined; its recurrence, constancy, or intermittence, should be inquired into—whether intensified by pressure, whether increased by movement, or diminished by rest, &c.

Special Senses.—Ascertain if there be strabismus; if there be protrusion of one or other eyeball; if the pupils be equal and normally sensitive to light; if there be any defects of vision—diplopia, dimness of sight, muscæ volitantes; if the eyelids can be closed and opened naturally. If necessary, the ophthalmoscope should be used to examine the fundus of the eye. The senses of hearing, taste, and smell should also be tested, if necessary.

Spinal Cord and Nerves.—Enquire if there be any pain or tenderness on pressure, along the spine; apply the hot sponge. Ascertain if there be any diminished or increased tactile sensibility of any part, or any perverted sensibility; any alteration of motility, loss of voluntary power, or reflex activity, alteration of electric contractility; any convulsive movements, tremors, twitchings, rigidity, tonic or clonic spasm; any loss of the co-ordinating power of the muscles, alteration in the gait, &c.

6. The Articulations.

Examine the joints by inspection and palpation. Observe if there be any swelling, redness, pain, or

tenderness on pressure, in any of them—any stiffness, pain on movement, deformities, malposition, or concretions.

7. The Skin and its Appendages.

Observe if there be any cutaneous eruptions, sores, tumours, or nodules—their anatomical characters, their connection with the several cutaneous strata, hair follicles, sudatory and sebaceous glands—their appearance under a magnifying lens or microscope.

8. Generative Organs.

Observe if there be any enlargement of the uterus; ascertain its nature by percussion, palpation, and auscultation, or the use of the uterine sound. By similar means ascertain the existence of ovarian tumour. Enquire about the regularity of the menstrual periods, freedom from pain at these times, menorrhagia, leucorrhœa, and other vaginal discharges. If necessary, examine the os and cervix uteri digitally and with the speculum. Note if there be any hardness, swelling, or ulceration of the os or cervix.

C.—PREVIOUS HISTORY.

The previous history of a patient consists of two parts—first, that *general* information which it is

necessary to obtain respecting every patient; and, second, that *special* information which has particular reference to the disease under which he is labouring.

General Information.—Sex, age, status in society, occupation, mode of living in regard to food, drink, habits, and dwelling; condition in respect to marriage, children, hereditary predispositions, and previous maladies.

It is always useful to ascertain how long a patient has been ill, and how long it is since he has been able to follow his occupation.

Special Information.—Each disease requires to be elucidated by information having special bearing on the causation of that disease. It is therefore impossible to give any general directions which would apply to all cases. In cases of infectious fevers, information is required respecting the mode of contagion; in inflammatory and febrile diseases, respecting exposure, the initial rigor or vomiting, &c.; in chronic Bright's disease, respecting gout, alcoholic excesses, repeated exposure to cold and damp, scarlet fever, &c.; in phthisis, respecting family proclivity, antecedent bronchitis, hæmoptysis, &c.; in disease of the heart and great vessels, respecting rheumatic fever, muscular exertion, blows or falls on the chest, —and so forth.

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