

(a) Inspection of the Veins.

1. The condition of the veins of the neck is of considerable importance in the diagnosis of diseases of the heart and lungs. Where the tissues of the neck are more or less wasted the veins may be quite prominent even when no disease exists within the chest, and in such cases they may be more or less distended during each expiration, especially if dyspnoea or cough is present. If the overdistended veins are completely emptied during deep inspiration and on both sides of the neck, we can usually infer that there is an overdistention of the right side of the heart. When a similar phenomenon occurs on one side only, it may mean pressure upon one innominate vein. So far I have spoken of venous changes synchronous with respiration, but we may have also

2. *A presystolic pulsation or undulation* seen either in the external jugular vein or in the bulbus jugularis between the two attachments of the sternomastoid muscles. Such pulsation or undulation, which is to be seen just before each systole of the heart, is not necessarily anything abnormal and must be carefully distinguished from

3. *Systolic venous pulsation*, such as occurs in one of the most serious valvular diseases of the heart—tricuspid regurgitation.¹ Systolic venous pulsation is more often seen upon the right side than upon the left side of the neck. There may be a wave during the systole of the auricle and another during the systole of the ventricle, the latter closely following the former. In any case in which a doubt arises whether a pulsation in the veins of the neck is due to tricuspid regurgitation, it is well to try the experiment of emptying the vein by stroking it from below upward. If it immediately fills from below, we may be practically certain that tricuspid regurgitation is present. In the vast majority of cases of venous pulsation due to other causes or occurring in healthy persons

¹A pulsating carotid may transmit an up-and-down motion to the veins overlying it. In such cases, if the veins be emptied by "milking" them upward, they will not refill from below.

a vein will not refill from below if emptied in the manner above described.

4. Rarely, superficial veins may be seen to pulsate in other parts of the body, especially in aortic regurgitation, and occasionally large and tortuous veins may be seen pulsating upon the thoracic



FIG. 60.—Tortuous Veins on Chest and Abdomen. (Autopsy showed obliteration of the vena cava inferior.)

or abdominal wall, representing an attempt at collateral circulation when one or the other vena cava is compressed (Fig. 60).

(b) Arterial Phenomena.

1. In thin or nervous persons pulsations are not infrequently to be seen in the carotids independent of any abnormal condition of the heart.

2. Very violent throbbing of the carotids, more noticeable than

that seen in health, occurs in many cases of aortic regurgitation and occasionally in simple hypertrophy of the heart without any valvular disease. From the same causes, visible pulsation may occur in the subclavian, axillary, brachial, and radial arteries, as well as in the large arterial trunks of the lower extremity.

I lately examined a blacksmith whose heart was considerably enlarged by hard work, but without any valvular disease. Pulsa-

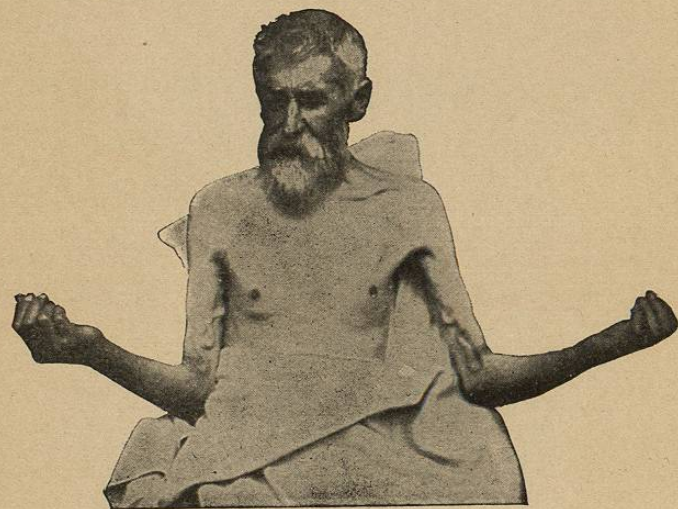


FIG. 61.—Enlarged Tortuous Brachial Arteries (Arterio-sclerosis).

tion was violent in all the peripheral arteries which I have just named.

3. In arterio-sclerosis occurring in spare, elderly men, with or without aortic regurgitation, one often notices a lateral excursion of the tortuous brachial arteries synchronous with every heart beat. An up-and-down pulsation may occur at the same time. Not infrequently the arteries which are stiffened by deposition of lime salts (see below, page 110) stand out visibly as enlarged, tortuous cords upon the temple and along the inner sides of the biceps muscle, (see Figs. 61 and 62) and occasionally the course of the radial artery

may be traced over a considerable distance in the forearm. In rare cases inequalities produced in the arterial wall by deposition of lime salts may be visible as well as palpable.

(c) *Capillary Pulsation.*

If a microscopic slide is placed against the mucous membrane of the lower lip so as partially to blanch its surface, one may see, with

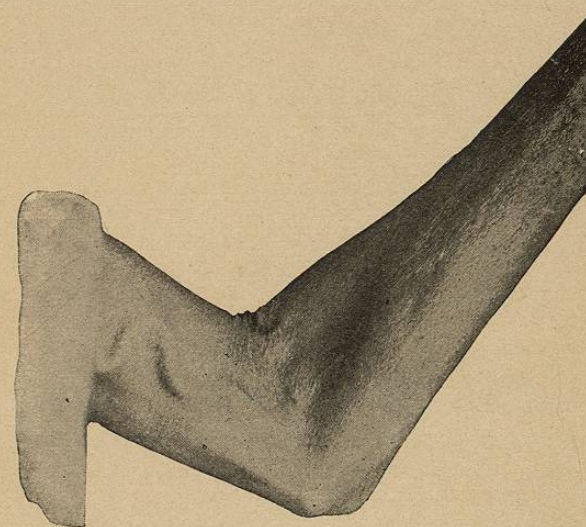


FIG. 62.—Enlarged and Tortuous Brachial Artery (Arterio-sclerosis).

each beat of the heart (in cases of aortic regurgitation and sometimes in other conditions), a delicate flushing of the blanched surface beneath the glass slide. The same pulsation is sometimes to be observed under the finger nails, or may be still better brought out by drawing a pencil or other hard substance across the forehead so as to cause a line of hyperæmia, at the edge of which the systolic flushing occurs. This phenomenon will be referred to again when we come to speak of aortic regurgitation. Here it suffices to say that it is not in any way peculiar to that disease, and occurs occasion-

ally in health, in anæmia, in exophthalmic goitre, and in conditions associated with low tension in the peripheral arteries, as well as in any area of inflammatory hyperæmia (jumping toothache, throbbing felon, etc.).

X. INSPECTION OF THE SKIN AND MUCOUS MEMBRANES.

Light may be thrown upon the diagnosis of diseases of the chest by observing the color and condition of the cutaneous surfaces as well as of the mucous membranes. We should look for the following conditions:

- (1) Cyanosis.
- (2) Œdema.
- (3) Pallor.
- (4) Jaundice.
- (5) Scars and eruptions.

(1) *Cyanosis.*

By cyanosis we mean a purplish or grayish-blue tint noticeable especially in the face, in the lips, and under the nails. There are many degrees of cyanosis, from the slight purplish tinge of the lips, which a little overexertion or slight exposure to cold may bring out, up to the gray-blue color seen in advanced cases of pulmonary or cardiac disease, or the dark reddish-blue seen in congenital malformations of the heart. Cyanosis makes a very different impression upon us when it is combined with pallor on the one hand or with jaundice on the other. When combined with pallor, one gets various ashy-gray tints, while the admixture of cyanosis and jaundice results in a color very difficult to describe, sometimes approaching a greenish hue. The commonest causes of cyanosis are:

- (a) Valvular or parietal disease of the heart.
- (b) Emphysema.
- (c) Asthma.
- (d) Pneumonia.
- (e) Phthisis.

(f) In some persons a certain degree of cyanosis of the lips exists despite perfect health. This is especially true of weather-beaten faces and those of the so-called "full-blooded" type.

(g) Methæmoglobinæmia, such as occurs after the excessive use of coal-tar analgesics (antifebrine, etc.).

A rare but very striking type of cyanosis is that seen in cases of congenital heart disease, in which the lips may be indigo blue in color or almost black while yet no dyspnoea is present.

(2) *Œdema.*

Œdema, or the accumulation of serous fluid in the subcutaneous spaces, is usually appreciated by palpation rather than by inspection, but sometimes makes the face look very puffy, especially under the eyes. This is not a common occurrence in diseases of the chest, in connection with which such œdema as takes place is usually to be found in the lower extremities and is appreciable rather by palpation than by inspection. If we are not familiar with a patient's face, we often do not perceive in it the changes of outline due to œdema which a friend would notice at once. Clothing is apt to leave grooves and marks wherever it presses tightly upon the œdematous tissues, as around the waist or over the shoulders. In the legs, the presence of œdema may be suggested by an unnaturally smooth, glossy appearance of the skin. Such impressions, however, may be false unless controlled by palpation, for simple obesity may produce very similar appearances.

(3) *Pallor.*

Pallor suggests, though it does not in any way prove, anæmia, and anæmia is a characteristic of the commonest of all diseases of the chest—phthisis. It is also seen in certain varieties of cardiac disease. Pallor of the mucous membranes, as seen in the lips and conjunctivæ, is much more apt to be a sign of real anæmia than is pallor of the skin. At best, pallor is only a sign which suggests to us to look further into the case in one or another direction, and of itself proves nothing of importance.

(4) *Jaundice.*

The yellowish tint which appears in the skin, and especially in

the conjunctivæ, when the escape of bile from the liver is hindered, is sometimes to be seen in connection with uncompensated heart disease when the liver is greatly distended by passive congestion. Pneumonia is occasionally complicated by jaundice; but beyond this I know of no special connection between this symptom and diseases of the chest.

(5) *Scars and Eruptions.*

In cases of suspected syphilis of the lung or bronchi the presence of scars and eruptions suggestive of syphilis may be useful in diagnosis.

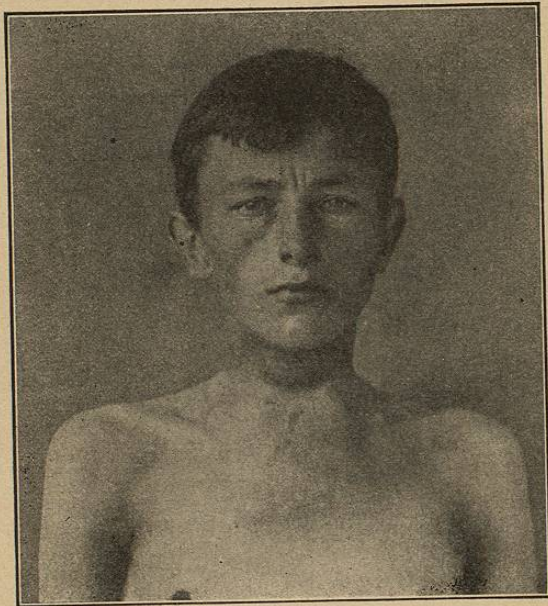


FIG. 63.—Sarcoma of Sternum and Cervical Glands. (Curschmann.)

XI. ENLARGED GLANDS.

Routine inspection of the chest may reveal the presence of enlarged glands in the neck or axillæ, and may thereby give us a clew

to the nature of some intrathoracic disease; for example, the presence of enlarged glands in the neck, especially if there are any scars, sinuses, or other evidence that suppuration is going on or has formerly taken place in them, suggests the possibility of pulmonary tuberculosis or of an enlargement of the bronchial and mediastinal glands. Again, malignant disease of the chest is sometimes associated with the metastatic nodules over the clavicle (see Fig. 63), and a microscopic examination of them may thus reveal the nature of the intrathoracic disease to which they are secondary. Very large and matted masses of glands above the clavicle, which have never suppurated and have been painless and slow in their growth, suggest the presence of similar deposits in the mediastinum as a part of the symptom complex known as "Hodgkin's disease." The presence of a goitre or enlargement of the thyroid gland may account for a well-marked dyspnoea.

Syphilis produces general glandular enlargement; the posterior cervical and the epitrochlear glands are often involved, but this is also the case in many diseases other than syphilis.