
On the anatomy of the breast, by Sir Astley
Paston Cooper, 1840

Rare Medical Books

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On the anatomy of the breast - Of the absorbent vessels

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OF THE ABSORBENT VESSELS.

BUT the most curious and extraordinary part of the structure of the breast of the male is its absorbent vessels.

I have delineated many of my preparations, which I have had in my private collection since the year 1825.

When the gland of the male breast is minutely injected with mercury or gelatine, absorbent vessels are seen to arise from its cells, and to pass in all directions: they very frequently communicate with each other, forming a very large plexus around the gland.

When the mercury is further pushed, large absorbent vessels are seen to spring from the cells, and to take different directions to enter the different absorbent glands in the vicinity.

In *Plate 2, fig. 3, of the Male*, these absorbents, as well as the gland of the breast, are seen minutely injected, and an absorbent vessel which arises from the plexus, taking its way to the first absorbent gland in the axilla, under the edge of the pectoral muscle.

Fig. 14 of the same plate shows the cells of the mammary gland filled; the absorbent vessels filled from them;

and those vessels accompanying the veins to the axilla, and upon the anterior veins towards the sternum.

In fig. 6, the minute ducts of the gland are shown, and in figs. 7, 9, and 11, the cells injected.

In fig. 10, a very minute injection of the gland has been made, and some vessels have been filled which are not absorbents, but which I believe to be veins.

In the other figures of the same plate, the absorbents will be seen very minutely divided, and forming a large plexus of vessels.

From this plexus, absorbent vessels arise, which encircle and cover the mammary gland, and then take the following courses.

The largest and the most readily injected are those which pass towards the axilla, and which terminate there in the absorbent glands, or as they were formerly called, lymphatic glands.

In *Plate 3 of the Male*, the first two of these vessels injected will be seen passing from the base of the nipple on the fourth rib. They then spread out, and reach from the upper part of the fifth rib to the third, entering several small absorbent glands, and form a considerable plexus.

This plexus ascends from the fourth to the third rib, and

there forms large absorbents upon the inner side of the axillary vein, upon the second and first rib; and here these vessels take two courses. The first passes over the first and second rib, under the clavicle, and above the first rib, and thence through a little ring in the fascia, which has strong and determinate edges, and which aperture is formed under the costo-clavicular ligament, on the inner side of the subclavian vein; through this opening the absorbents proceed, to enter the angle of the jugular and subclavian veins; but prior to their doing so, they pass through several glands situated behind the clavicle.

The other course of the absorbents from the axilla is the following: they pass under the vein and artery, and behind the axillary plexus of nerves, and then crossing the axillary plexus, they enter at the angle between the jugular and subclavian veins.

These latter absorbents join those of the arm, enter absorbent glands, and in *Plate 3*, fig. 2, their termination in the veins is seen at a valve in the vein.

In the same plate, fig. 3, the plexus of absorbents from the nipple has been injected, and the vessel shown which passes from it to the axillary absorbent vessels, and their glands.

Those absorbents which take their course to the axilla,

are placed upon that fascia of the thorax which forms the broad band of axillary fascia between the pectoralis major and the teres major and latissimus dorsi, and passing through one, and sometimes two apertures, to reach the glands in the axilla.

This broad band of fascia is placed on the outer side of the breast, and uniting the two axillary bands of muscle and tendon, or alæ, forms the floor of the axilla, shutting in its vessels, its glands, and its nerves.

After passing through this axillary fascia, and traversing the axillary space, the absorbents enter the ring or ellipse, under the costo-clavicular ligament, and on the left side terminate at the angle formed by the jugular vein with the subclavian, near where the thoracic duct also terminates; and upon the right side in the absorbent or cervical trunk, at the angle of the right jugular and subclavian veins.

Beside the absorbent vessels which I have described, there is another set taking its course from the sternal side of the breast to the cartilages of the ribs. These pass through the anterior mediastinum in two directions: the first and upper set enter the anterior mediastinum, between the second and third intercostal spaces; generally the second and lower pass into the anterior mediastinum between the fourth and fifth cartilages of the ribs: here they join the internal mam-

mary artery and veins, enter an absorbent gland, and join with the absorbent vessels from the convex or anterior surface of the liver, which mount upon the suspensory ligament, and piercing the diaphragm, enter the anterior mediastinum.

The absorbents of the left breast, after passing through the anterior mediastinum, terminate near the thoracic duct on the left side. But upon the right side, from the anterior mediastinum, a part of these vessels pass into the junction of the right jugular and subclavian veins.

It appears from this account of the absorbent vessels of the male breast, that when any secretion proceeds in it, as there would be great difficulty in its escape at the small orifices of the nipple, the fluid is taken up by the absorbent vessels, and carried into the circulation. Whether this fluid is necessary or not to the blood, I have had no opportunity of ascertaining, but the structure is very curious, and the assemblage of absorbents is quite extraordinary.
