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

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## On the anatomy of the breast - Of the veins of the breast

Sir Astley Paston Cooper, Bart.

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### OF THE VEINS OF THE BREAST.

The branches of veins arising from the nipple pass from its papillæ in parallel branches to its base, and then form radii to an ellipse behind the areola at its margin. Their beautiful and minute division into branches upon the papillæ will be seen in the plate, and these, with corresponding divisions of the arteries, constitute the erectile tissues.

From the ellipsis of veins four principal branches proceed, beside others which are less important.

These are distributed on the fore-part of the breast in a net-work of very free and frequent communication.

They are much more numerous than the larger corresponding branches of arteries.

They, in their principal cutaneous branches, do not accompany the arteries; but some which are deeper seated do, as well as those of the interior of the gland, but many of these afterwards rise to join the superficial veins upon the surface of the breast.

With respect to the terminations of the veins:—

First. They end by two large branches in the axillary vein, and by several branches in the vein accompanying the arteria thoracica longa.

Secondly. They terminate in, or communicate with, the cephalic vein.

Thirdly. One passes into the internal mammary vein (of which there are generally two), between the first and second, or sometimes between the second and third rib.

Fourthly. A deep-seated vein passing from the back of the breast, enters the fourth mammary intercostal vein, see Plate, and is then continued into the internal mammary vein.

Fifthly. A plexus of veins passes over the clavicle to terminate in the external jugular and subclavian veins.

But although the above are the principal terminations, yet they communicate with other branches of the internal mammary veins; and in a putrid body they colour the skin, and exhibit a beautiful and extended plexus, passing in all directions from the circumference of the breast.

With respect to the deep-seated veins of the gland, they for the most part accompany the arteries, but are somewhat larger, and they terminate in the superficial plexus under the skin, and in deep-seated veins upon the costal surface of the breast, which pass to the intercostal veins.

When the breast is in a state of lactation, the veins, like the arteries, divide into numerous capillary branches, which are spread upon, and form a plexus within the glandules

and which return that blood from the arteries which is not converted into milk.

The course, both of the arteries and veins on the anterior part of the breast, is through apertures in the ligamenta suspensoria, which form sheaths upon them, and preserve them in their situation.

In lactation both sets of vessels are somewhat serpentine in their course, as in most of those parts which change their size, as the uterus, or are much exposed to pressure, as in the scalp, or to interruptions of the circulation, as in the lips.

As the vessels are extraordinarily increased in some malignant diseases, and excessively distended with blood, so as to produce much pain to the patient, from this accumulation and distension, in addition to other causes, I have for more than twenty years been in the habit of bleeding in these complaints, by opening the veins of the part. When the pain is severe, and the functions of the chest are embarrassed, it affords instantaneous and great relief.

For this purpose, I have always in my case, a needle which cuts upon each side, its edges being lancet-shaped, and after placing my finger on a large vein, formed by the junctions of several veins, and between the breast and the clavicle, I prick the vein with this instrument. A lancet would answer equally well; but it excites more apprehension on the part of the patient, and makes a larger wound.

The opening is much smaller than that produced in bleeding in the arm.

The quantity of blood considerably exceeds that drawn by leeches; and it may be extracted in three or four minutes to the amount of from four to six ounces, and the surgeon avoids the long-continued exposure which the application of leeches requires, and the trouble and inconvenience of the continued fomentation afterwards.

The pain which the operation gives, no woman will apprehend, and she smiles the moment the puncture has been made: she must be very pusillanimous who would not submit to this trifling operation.

As soon as sufficient blood has been drawn, a piece of lint and adhesive plaister should be applied over the puncture, to prevent any subsequent bleeding.

In describing the arteries and veins of the breast, it is impossible that I can be insensible to the varieties of their origins and course; but I believe that I have described the sets which are the most commonly observed, and to point out all their varieties would be quite useless.