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Paston Cooper, 1840

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On the anatomy of the breast - Of the nerves of the male gland, areola and nipple

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OF THE NERVES OF THE MALE GLAND, AREOLA,
AND NIPPLE.

THE nerves of the male breast are divided into two sets ; the axillary, direct, or posterior, and the sternal reflected or anterior nerves.

They are derived from the dorsal nerves, and are, like those of the female, composed of three parts, as to the sources from which they spring.

First, from the posterior roots of those originating from the spinal cord, and are called, from their possessing a ganglion, the ganglionic root.

Secondly, they arise from the fore part of the spinal cord, and these are the anterior roots.

Thirdly, the two roots unite, and are then joined by the grand sympathetic nerve, which crosses them opposite to the head of the ribs.

The dorsal nerves then pass forwards at the inferior edges of the ribs, in the grooves formed for them, and the intercostal arteries and veins ; and about half-way forwards towards the sternum, they divide into two branches, the direct and the reflected branch.

The direct penetrate the intercostal muscles behind the

breasts, at the inferior edges of the ribs, and they pass directly forwards.

The reflected are continued upon the inner side of the chest, in the grooves of the ribs, until they reach the sternum : here they penetrate the intercostal muscles, and are reflected back upon the fore-part of the chest, to distribute their branches upon the skin and muscles on the surface of the breast.

The nerves which principally supply the breast are the third, fourth, and fifth dorsal.

The third direct dorsal nerve sends a branch down upon the external mammary artery, which descends upon its coats towards the nipple. In its course it passes upon the pectoralis major muscle, and it sends branches forwards to the skin above the breast.

The fourth quits the inner part of the chest between the fourth and fifth ribs, in a line with the nipple, and joining the posterior or external mammary artery, it passes with its branches to the nipple, areola, and gland. It divides into numerous and large filaments, which will be seen in *Plate 14*, forming a plexus which is distributed to the mammary gland.

The fifth nerve passes out of the chest between the fifth and sixth rib, and being continued to the lower part of the mammary gland distributes its branches to it, and freely anastomoses with the fourth; they send their branches to

the nipple and areola. These nerves also pass the nipple to supply in part its sternal side and that of the areola. The sixth nerve passes below the nipple upon the extreme branches of arteries which are distributed to the nipple.

The anterior or reflected nerve which supplies the breast is principally derived from the fourth dorsal. This nerve after sending its direct branch through the intercostal muscles to the outer part of the chest and to the gland of the breast, transmits its reflected branch forward in the groove of the fourth rib to the cartilage of that rib, and to an aperture between that rib and the fifth cartilage, by the side of the sternum. When it reaches that spot it penetrates the chest; it becomes reflected, and passing from the sternum to the base of the nipple with the anterior artery, it there distributes its branches to the areola and nipple, anastomosing with the fourth and fifth posterior on the sternal side of those parts.

The third reflected branch of the dorsal nerve send branches upon the anterior artery of the breast, which are continued upon that artery as it descends, until the fourth reflected is distributed upon that artery where it supplies the inner part of the areola and base of the nipple.

The fifth anterior nerve sends its filaments to the branches of arteries below the nipple, but this is a small nerve*.

* For the branches of the dorsal nerves which do not go to the breast, see SWAN *on the Nerves*.