

Module 3 Breast Anatomy and Physiology

1. Breast Anatomy and Physiology

Please review the following: Section 1 Anatomy and Physiology Module 1 Anatomy and Physiology of the Breasts. ⁽¹⁾

The blood supply to the breast skin depends on the subdermal plexus which is in communication with underlying deeper vessels supplying the breast parenchyma .⁽²⁾ In the breast, the subdermal plexus has been demonstrated to be more attenuated especially in larger specimen than the plexus of other body areas such as the leg, arm, neck and abdomen. ⁽⁴⁾

2. Subdermal Plexus ⁽⁴⁾

There are various plexuses in the skin, of which the subepidermal (subpapillary) plexus is the most superficial. It is located at the boundary between the papillary and reticular layers of the dermis.

Controversy and confusing terminology exists however regarding plexuses in deeper layers of the skin. Histologically, there is a vascular network on the boundary line between the dermis and subcutaneous tissue, which is called the cutaneous plexus. Vessels enter the dermis and form the subepidermal plexus from the superficial side of the cutaneous plexus. The cutaneous plexus is also referred to as the subdermal plexus. Another plexus is also described, which is between the subdermal and subepidermal plexuses, and is called the dermal plexus. It is formed in the reticular layer of the dermis by numerous arterioles from the subdermal plexus.

Vessel diameters of the subdermal plexus are not uniform and exhibit differences in vascular continuity.

3. Mastectomy and the Subdermal Plexus

During mastectomy the subdermal plexus may be disrupted or removed thus reduce the volume of vascularized tissue remaining in the skin envelope. ⁽⁵⁾

REFERENCES

- ¹ LifeCell LST-0001
- ² emedicine.medscape.com/article/1273133-overview accessed 8/25/10
- ³ Pearl, RM: The Vascular Supply to the Skin: An Anatomical and Physiological Reappraisal-Part 1 *Annals of Plastic Surgery* Vol. 11 No. 2 August 1983
- ⁴ Imanishi,N, et al: Angiographic Study of the Subdermal Plexusw: A Preliminary Report *Scandinavian Journal of Plastic and Reconstructive and Hand Surgery*, 34:2, 113-116
- ⁵ Pearl, RM: The Vascular Supply to the Skin: An Anatomical and Physiological Reappraisal-Part II *Annals of Plastic Surgery* Vol. 11 No. 3 September 1983