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Preparation and Realization of Anastomosis in the Placenta for Vascular Neurosurgeon Training

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Clinical Image

To know, the way of preparing the placenta and the dissection of this to perform anastomosis.

By means of newly obtained placentas, this exhaustive lavage is performed, a 4fr feeding catheter is placed, one in each artery and one in vein, is made to wash blood vessels with water and then irrigate red paint diluted with diluent, to color the artery, the same procedure is repeated in the vein but blue color for the differentiation of the vessels. These

catheters are in continuous color irrigation. Later proceed to microscope time, the removal of the arachnoid simulation, circumferential dissection of arteries and veins of the placenta. Subsequently an artery-artery anastomosis and an artery-vein are performed [1-3].

Four placentas were used in September 2017. The dissection was performed under the supervision of Dr. Feres Chaddad Neto, Vascular Neurosurgeon and Head of the Microsurgical Neuro Techniques Laboratory of the Federal University of São Paulo – Brazil (Figure 1 and 2).

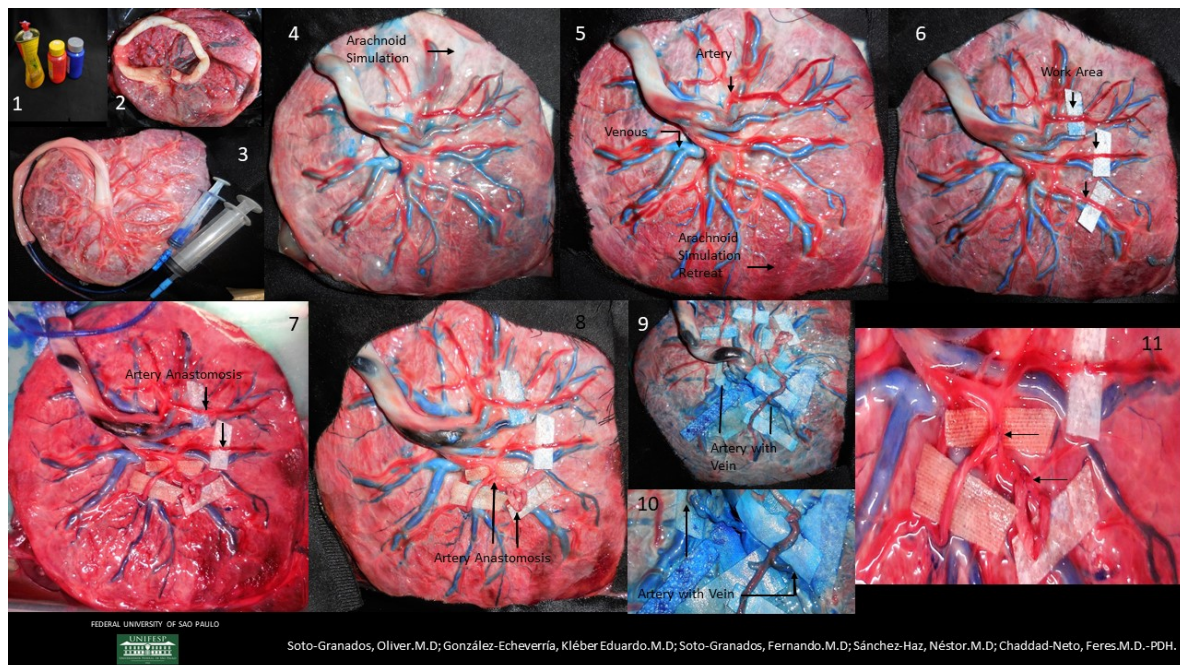


Figure 1 (1) Diluent and colors for preparation of the placenta. (2) Placenta. (3) Cannulation and lavage of the placenta. (4) Identification of arachnoids simulation in the placenta. (5) Removal of arachnoids simulation and identification of arteries and veins. (6) Work area: Circumferential dissection of arteries. (7) Perform anastomosis of arteries with nylon number 10-0. End to end anastomosis (simple knots). (8) Perform anastomosis of arteries with nylon number 10-0. End-to-side anastomosis (simple knots). (9) Vein - artery anastomosis with nylon number 10-0. End-to-side anastomosis (simple knots). (10) Vein - artery anastomosis with nylon number 10-0. End to end anastomosis and End-to-side anastomosis (simple knots). (11) Artery anastomosis (end to side, simple knots) with nylon number 10-0.

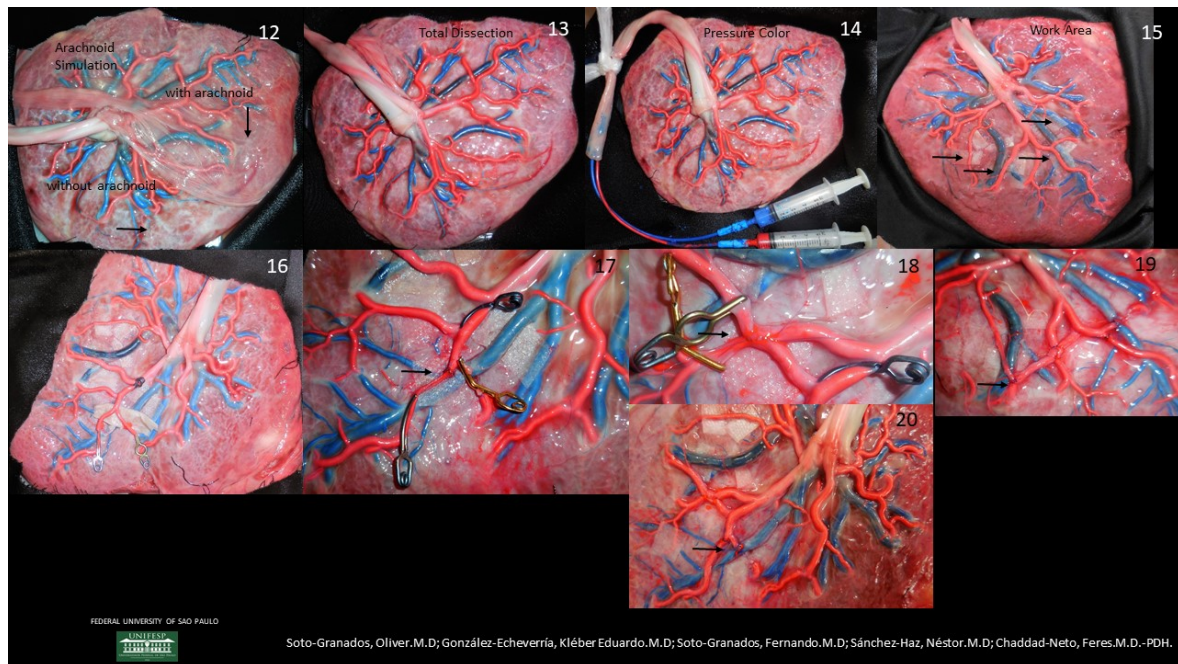


Figure 2: (12) Arachnoid simulation of the placenta. (13) Total dissection of arachnoid simulation. (14) Pressure paint injection to color the vessels. (15) Work area. (16) Clips placement. (17) End to end anastomosis (simple knots). (18) Side to side anastomosis (continuous knots). (19) End-to-side anastomosis (simple knots). (20) Vein artery anastomosis. End-to-side anastomosis (simple knots).

The material used for the dissections were:

1. A bucket.
2. Carl Zeiss OPMI peak f 170 microscope.
3. Dissecting tweezers with and without teeth.
4. Micro scissors.
5. Scalpel sheet number 11.
6. 4 clips (Yasargil).
7. 10-0 nylon suture.
8. Camera: Brand Nikon 12x COOLPIX S6800 digital.

References

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