

cavity of the uterus in cases where there are retained shreds of placenta or blood clot, or in other circumstances which might seem to demand unusual precautions. My thanks are due to Messrs. Christy & Co., the makers of the bougies, for the great trouble they have taken to produce an instrument which would fulfil my requirements, and for their liberality in placing a considerable quantity of them at my disposal for use in the hospital.—A. G. R. Foulerton, L.R.C.P., etc., in *Lancet*.

AN IMPROVED METHOD OF MANAGING THE THIRD STAGE OF LABOR, WITH A CRITICISM OF THE THEORY THAT THE PLACENTA IS THEN SEPARATED BY THE UTERINE PAINS.

1. At the beginning of labor the placenta and uterus are together to be considered as made up of the following parts, so far as the question of separation is concerned :

(a) *The part to be separated*, comprising amnion, chorion, chorionic villi, intervillous spaces, large-celled layer of serotina.

(b) *The line of separation*, lying between the large-celled and small-celled layers of the placenta, and termed the trabecular layer. It is formed chiefly by the persistent fundi of the uterine glands.

(c) *The part left behind* after the placenta is separated, and consisting of the small-celled layer with remains of uterine glands, smaller in lumen, set on the uterine muscle.

2. The chorionic villi get their blood-supply from the umbilical arteries of the foetus. The intervillous spaces have blood poured into them from the maternal circulation, the blood passing by the curling arteries into the spaces, and from these into the uterine sinuses by the slanting veins. The venous supply of the uterus is much more abundant than the arterial.

3. At the trabecular layer we may regard the placental area (that is, uterine surface of separated placenta) and placental site as coinciding during pregnancy, with trabecular layer joining them.

4. Separation of the placenta can only take place when there is disproportion between placental area and placental site.

5. The placenta does not separate during the first and second stages of labor, because all changes in the placental site (diminution during pains and expansion when pain dies off) are accurately responded to by the placenta, owing to the activity of the foetal and maternal blood-supplies.

6. During the third stage of labor the foetal circulation is cut off and the villi are closely

pressed together, showing obliteration of intervillous spaces. The increase in placental site following a third-stage pain is not followed up by the placental area, as the placenta is now practically a bloodless structure.

7. The placenta does not separate on diminution of placental site to 4" x 4".

8. Any diminution of site below this introduces no relative change at plane of separation. The area of the placental site and the placenta still correspond.

9. A disproportion in area between the placental site and placenta brings about tension on the trabeculae of the trabecular layer, that is, tears them.

10. This disproportion happens during the third stage in the relaxation following a pain, and therefore separation occurs after the pain. During the relaxation the placental site increases slightly, but the placenta, now bloodless, or nearly so, does not respond ; hence disproportion of area.

11. The placenta, when separated, is expelled by the pains either as Duncan or Schultze has figured.

12. All separation of placenta or membranes follow one mechanism—" *Placenta and membranes separate when there is a disproportion at the plane of separation between their area and their site of attachment. This disproportion is only slight, as the trabeculae are microscopic.*"

The gist of the view advocated is that the placenta separates in third stage after the pains, and is expelled when separated by the pains. The important practical point is that manipulation can not separate the placenta, but can only aid expulsion.

From the above demonstration, Hart has formulated the following rules for the management of the third stage of labor.

1. When the child is born, note that the fundus uteri stands at or below the level of the umbilicus, and that the uterus does not contain a second child. Give an ergotine injection in a multipara at any rate, if labor has been slow.

2. Do not tie the cord until the child has cried freely, and then tie only one ligature.

3. Cut the cord on the placental side of the ligature, and let the placental part of the cord drain thoroughly into any small dish ; then tie it, to prevent any staining of the bed linen. Tie a second ligature at once, however, if a second child be present.

4. Before applying the first ligature, it should be thoroughly ascertained by abdominal palpation that the uterus is not so relaxed as to bleed.

5. Continue with the hand on the uterus ; do nothing when a good contraction comes on, and allow the uterus its normal relaxation after the pain is over.

6. Should bleeding from the uterus come on, or