# *BROAD LIGAMENT*

# I. INTRODUCTION

The broad ligament is not strictly speaking a ligament in the usual sense, since it consists of no more than a paired lax double fold of peritoneum lying lateral to the uterus, and it plays little part in uterine support.

# II. DESCRIPTIVE ANATOMY

## A- GENERAL SHAPE

Each broad ligament consists of a double fold of peritoneum lying sagittally from the lateral border of the uterus to the pelvic walls of the pelvic cavity.

Thus, its medial edge is attached to the side wall of the uterus and flows over its intestinal and vesical surfaces as its serous coat.

The lateral edge is attached to the side wall of the pelvis, whence the two layers of its inferior edge or base pass forwards and backwards to line the pelvic cavity; the posterior layer most importantly has the ureter adhering underneath it.

The line of lateral attachment crosses the obturator nerve, superior vesical or obliterated umbilical vessels, and the obturator artery and vein.

The upper border of the broad ligament is free, forming the mesosalpinx and containing the uterine tube, and the lateral quarter of this upper edge forms the suspensory ligament of the ovary, formerly the infundibulopelvic ligament, which contains the ovarian vessels and lymphatics.

The anterior layer of the broad ligament is bulged forwards by the round ligament of the uterus just below the uterine tube.

The posterior layer bulges backwards as the mesovarium, suspending the ovary.

## B- PARTS OF THE BROAD LIGAMENT

The broad ligament is made of four fin-shaped folds, from front to back, the funicular meso, the mesosalpinx, the mesovarium and the mesometrium. (Figure 1)

The funicular meso is slightly raised by the round ligament of the uterus at the junction of the mesosalpinx backwards with the anterior surface of the mesometrium and the lateral peritoneal ligament of the bladder forwards.

The mesosalpinx is raised by the uterine tube and prolongs the mesometrium upwards and laterally.

The mesovarium is subtended by the ovary and the ligament of the ovary at the junction of the mesosalpinx with the posterior surface of the mesometrium.

The mesometrium prolonges the perimetrium laterally to the pelvic walls following the orientation of the body of the uterus.

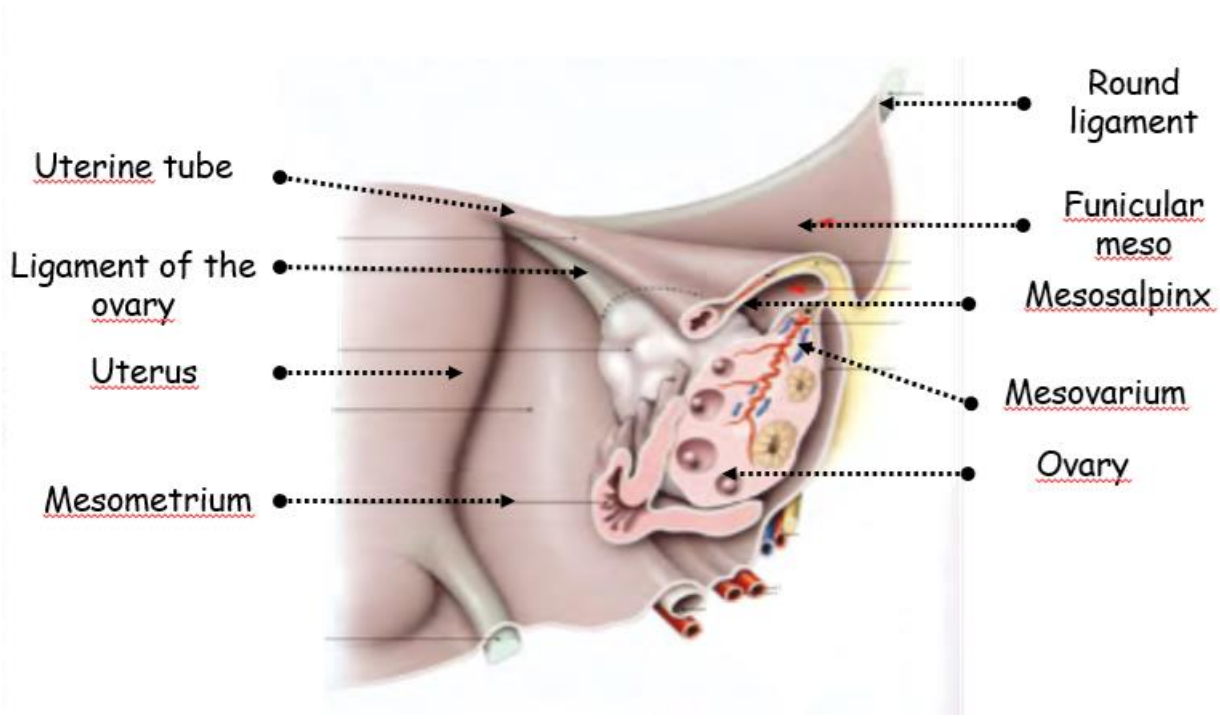


Figure 1: Schematic view showing the projection of the spleen on the thoracic wall (from Kamina)

## III. STRUCTURE

Between the two layers is a mass of areolar tissue, the parametrium, in which lie the uterine and ovarian vessels and lymphatics, the round ligament of the uterus, the ligament of the ovary, and vestigial remnants of mesonephric tubules, the epoophoron and paroophoron.

## IV. ANATOMICAL RELATIONS

As its name implies, the broad ligament is large and, thus, its anatomical relations are numerous following each part of it.

## A- ANTERIOR INFERIOR SURFACE

The anterior inferior surface of the broad ligament contains the funicular meso. The latter separates the pre-ovarian fossa from the paravesical fossa. (Figure 2)

The paravesical fossa continues, laterally, the supravesical fossa and is in contact with intestinal coils and the sigmoid colon to the left.

The pre-ovarian fossa is triangular limited laterally by the external iliac vessels with a posterior angle hidden by the ampulla and infundibulum of the uterine tube.

The pre-ovarian fossa is the pelvic continuity of the iliac fossa and, thus, is in contact with the caecum and appendix to the right and the sigmoid colon to the left.

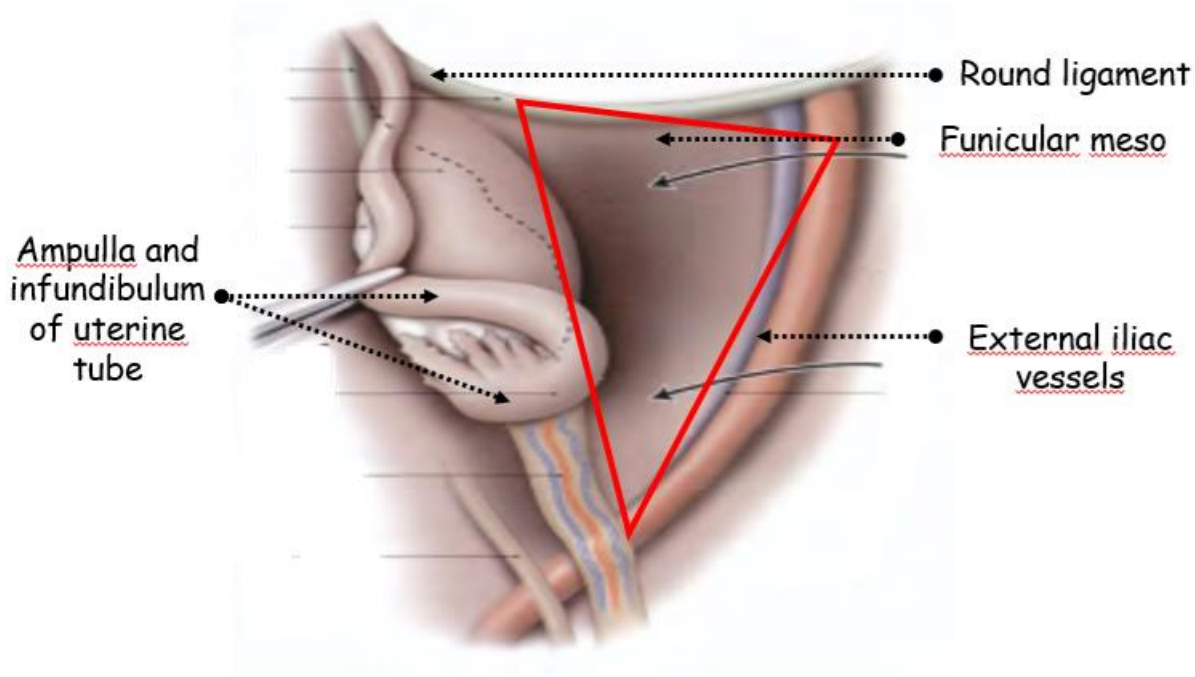


Figure 2: Posterior view of the pre-ovarian fossa (from Kamina)

## B- POSTERIOR SUPERIOR SURFACE

The posterior superior surface is broader. It extends down lower than the anterior surface.

It contains the mesovarium.

The mesovarium contains, successively, the ligament of the ovary, the mesovarian border of the ovary and the infundibulopelvic ligament of the ovary.

It separates the tubo-ovarian recess upwards from the ovarian fossa downwards. (Figure 3)

The tubo-ovarian recess is, thus, limited by the mesosalpinx upwards that separates it from the pre-ovarian fossa forwards and by the mesovarium downwards. It is, usually, hidden by the mesosalpinx.

The ovarian fossa is limited by peritoneal folds raised by sub-peritoneal structures, forwards, the mesovarium, upwards, the external iliac vessels, downwards, the origin of the umbilical and uterine arteries and, backwards, the internal iliac vessels and the pelvic ureter.

Under the plane of the ovarian fossa, passes the obturator pedicle.

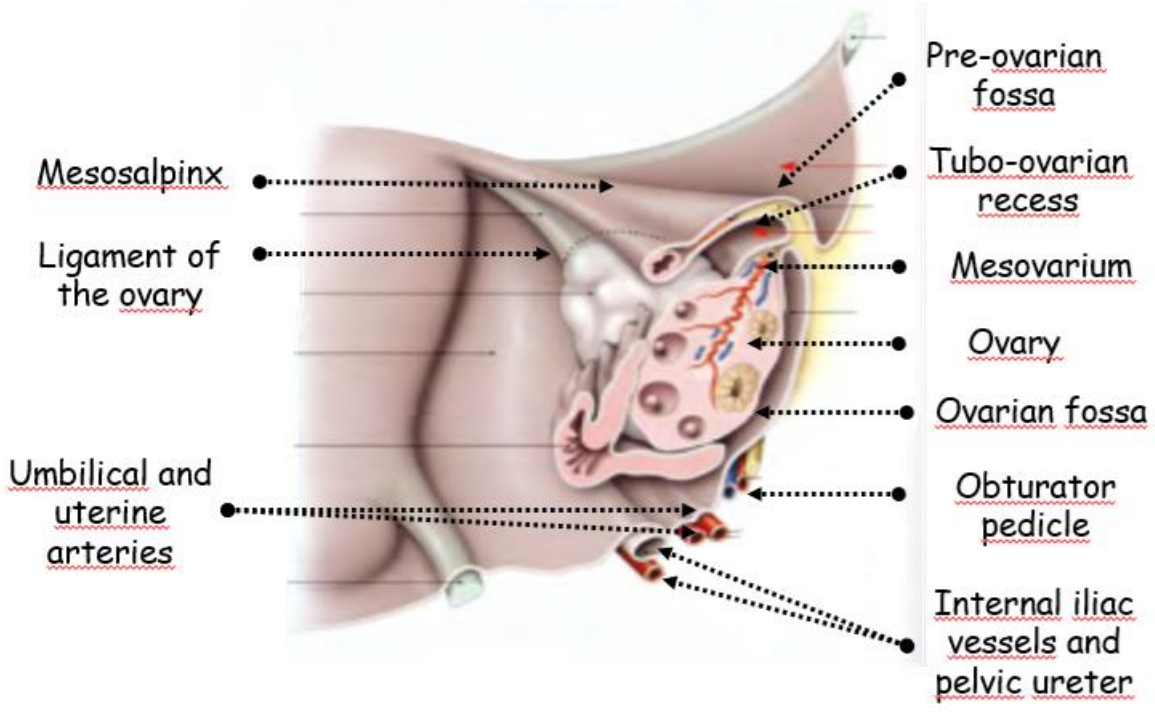


Figure 3: Posterior view of the uterus and ovary showing the left broad ligament (from Kamina)

## C- UPPER BORDER

The upper border contains the mesosalpinx. The latter folds back with the uterine tube and hides the ovarian fossa. It contains the infratubal and infra-ovarian arterial circles, lymphatics, nerves and embryonic remnants, mainly, the epoophoron and paroophoron.

### D- LOWER BORDER

The lower border of the broad ligament is continuous with the lateral border of the lateral ligament and is separated from the pelvic diaphragm by the pelvic extraperitoneal space.

### E- MEDIAL BORDER

The medial border of the broad ligament corresponds to the point of fusion of the double fold of the broad ligament containing the uterine artery and its branches.

### F- LATERAL BORDER

The lateral border constitutes the point of fusion of the broad ligament with the parietal pelvic peritoneum.

## V. CONCLUSION

The broad ligament is a kind of greater omentum to the pelvic cavity. It rather divides the pelvic cavity to compartments and fossae through folds than fixes the uterus. This

segmentation of the pelvic cavity may help as surgical landmark when approaching the female

pelvic cavity.