

4. Discussion

Although uterine atony is the indication for use of modified B-Lynch suture, but it has been shown in many case reports that this suture is also useful in controlling bleeding in cases of placenta previa and placenta accreta. The first description of uterine compression sutures was published in 1996 as a single case report from Zurich, 22 that was followed by the famous report of five consecutive cases utilizing the B-Lynch suture in 1997. In 2000, Cho et al described a hemostatic multiple square suture to approximate the anterior and posterior uterine wall. In 2002, Hayman et al proposed a uterine compression suture that involved two vertical apposition sutures together with two transverse horizontal cervico- isthmic sutures. (22)

In 2005, Hwu et al described the use of two parallel vertical compression sutures placed in the lower segment to control bleeding from placenta praevia. (14) These sutures compressed the anterior and posterior uterine wall without penetrating the full thickness of the posterior wall. Another modification was the Pereira suture reported in 2005, which consisted of longitudinal and transverse sutures applied with superficial intra-myometrial bites only (15, 16, 17).

Bahl technique entailed two sutures instead of one, with the knots tied in the anterior-inferior margin of the lower uterine segment, without any difference in the compression effects compared to the original B-Lynch suture. It can be seen that the principle, namely, compression of the uterine body, remains the same for all types of compression sutures. (29)

In the literature, some series have described compression sutures solely used for placenta praevia/accreta, (34, 36, 37, and 38) While others detailed their use exclusively for atonic uteri (24, 25, and 26) and still others referred to application of the technique to all etiologies (21, 31).

Apart from compressing the uterine body in uterine atony, the original paper on the B-Lynch suture also advocated its use for placenta praevia. It was proposed that the sutures would exert longitudinal compression and achieve evenly distributed tension over the uterus, including the lower segment (39)

In addition, for cases of major placenta praevia, B-Lynch also described the use of additional independent figure-of-eight sutures placed either anteriorly, posteriorly, or both on the lower segment prior to suture application. The classic B-Lynch compression sutures are more invasive because it entered the uterine cavity and take bites more lateral near the high vascular areas. (39)

In Hackethal modification, an absorbable Vicryl 0 thread and an XLH needle whose curve straightened manually for suturing. To perform an interrupted single U-suture, the needle inserted at the ventral uterine wall, led through the posterior wall and then passed back to the ventral wall where the thread joined with a flat double knot.

While the lead surgeon was tying the suture, the assisting surgeon performed bi-manual uterine compression. The number of sutures required depended on the size of the

uterus and the persistence of bleeding. In general 6–16 U-sutures in horizontal rows along the uterus starting at the fundus and ending at the cervix. Thus, approximately 2–4 cm of tissue compressed within each suture. (40)

The more suture bites associated with bleeding and distortion of the uterine anatomy. In my modification (presented work) no entry into the uterine cavity so intrauterine adhesion would be less. The vertical sutures done after closure of the uterine wall then sutures suspended in the median raphe in the posterior wall of the uterus and this allowed sutures to be taken in fibrous tissue with less bleeding, the other advantage was the more support of the vertical sutures in the midline without sliding laterally.

The new modification entailed adding additional horizontal sutures tied around the vertical one above and below the suture line. The horizontal sutures passed in avascular area in the broad ligament make more tension around the vertical one and served to make more pressure in the lower segment so the technique easily applied to other indications like placenta previa and accreta.

The postpartum hemorrhage remain a significant cause of maternal morbidity and mortality, but with simple surgical modification to the compression sutures conservative surgery saved patient life and uterus for future fertility.

5. Acknowledgement

Special thanks to Benha School of medicine, obstetrics and gynecology department who accepted the study and it is a great honor to participate work with my all professors in the department

6. Conflict of interest

No conflict of interest to declare about this work

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