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Continuous Versus Interrupted Sutures for Repair of Episiotomy or Second-Degree Perineal Tears: a Critical Decision Enigma.

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ABSTRACT

Given the rising privacy concerns, the data mining community has faced a new challenge. Having shown how effective its tools are in revealing the knowledge locked within huge databases, it is now required to develop methods that restrain the power of these tools to protect the privacy of individuals. The question how these two contrasting goals, mining new knowledge while protecting individuals' privacy, can be reconciled, is the focus of this research. We seek ways to improve the tradeoff between privacy and utility when mining data.

KEYWORDS: Episiotomy, Suturing techniques, Perineal tears

Introduction:

Episiotomy facilitates and accelerates the second stage of labor, Hence it is a routine in all primiparus and most multiparous women. Perineal pain is the most common complaint after episiotomy and mothers especially in developing countries are burdened with extra pressures and their early mobilization is essential.

Pain is related to perineal trauma and this pain and discomfort interferes with the normal activities in post-partum recoveries, it affects the relation between the mother and the infant and also resuming the sexual activity in the first year of childbirth.

Short term pain and disparurinia has been seen to be affected on the type of perinial repair done by skilled midwives or the doctors and the material used.

In the majority of childbirths, damage to the perineum is likely to occur to a greater or lesser degree if adequate protection to the area is not provided at the moment the baby's head is delivered and if extraction of the shoulders is not appropriately performed. Performing an episiotomy is generally reserved for complicated childbirths, in cases of fetal distress, or when tearing of tissues with serious consequences is foreseen.[1]

Morbidity associated with childbirth may affect women's physical, psychological, and social well-being, both in the immediate and long-term postnatal period. Perineal discomfort may disrupt breastfeeding, family life, and sexual relations.[2]

The best technique for this repair would be one which requires less time to perform and less use of material which produces less pain in short and long term resuming intercourse sooner and not requiring to remove the suture. If repair is done inadequately ,i.e. bulbospongiosus and transverse perinial muscles are not correctly sutured and there is a defect in perinieal body repair then women will continue to have long term problems such as superficial dyspareunia.

This pain can be extremely disturbing and interferes with the day to day activities of the new mothers. Her demands of continuous parenthood are thus adversely affected which leads to a physical as well as mental fatigue to the new mother.

There are various techniques taught since the first person Joseph Delee who suggested a routine episiotomy for all primiparus women to facilitate early second stage of labor. While suturing an episiotomy it is important that operator achieves complete hemostasis and restores the correct anatomical structure of the incision.

There are two common methods of suturing an episiotomy which includes continuous and interrupted methods. A critical decision on the type of suturing to be selected needs to me made for the complete welfare of the new mother.

P Valenzuela et al. did a randomized controlled trial to evaluate the repair techniques of continuous and interrupted methods for episiotomy or perineal tears. Four hundred forty-five women who had undergone vaginal deliveries with episiotomies or second-grade tearing of the Perineum between September 2005 and July 2007 were included in this study.

One group was repaired with continuous, nonlocking sutures involving the vagina, perineum, and subcutaneous tissues. The other group had continuous, locking sutures of the vagina, interrupted sutures in the perineal muscles, and interrupted transcutaneous sutures. The threads used for stitching were
Identical in both groups. The author concluded that episiotomy and perineal tear repairs with continuous suturing were quicker and used less suture material without an increase in complication than interrupted suturing.[3]

Christine Kettle et al. did a randomized controlled trial to compare the continuous technique with the interrupted method of perineal repair, and the more rapidly absorbed suture material with the standard polyglactin 910 material. They found that the introduction of a continuous suturing policy would reduce overall expenditure, since less suturing material is needed than for the interrupted method of repair. Indeed, use of the more rapidly absorbed polyglactin 910 material is associated with a substantial reduction in the need to have sutures removed. These findings are of importance to women and professionals wherever childbirth takes place.[4]

Kindberg did a double-blind randomized controlled trial to compare a continuous suture technique with interrupted stitches using inverted knots for postpartum perineal repair of second-degree lacerations and episiotomies. A total of 400 healthy primiparous women with a vaginal delivery at term ere included. Randomization was computer-controlled. Structured interviews and systematic assessment of perineal healing were performed by research midwives blinded to treatment allocation at 24–48 hours, 10 days and 6 months postpartum. Pain was evaluated using a visual analogue scale and the McGill Pain Questionnaire. Wound healing was evaluated using the REEDA scale and by assessment of gaping wounds >0.5 cm. Analysis complied with the intention-to-treat principle. The authors concluded that interrupted, inverted stitches for perineal repair leaving the skin unsutured appear to be equivalent to the continuous suture technique in relation to perineal pain, wound healing, patient satisfaction, dyspareunia and need for resuturing. The continuous technique, however, is faster and requires less suture material, thus leaving it the more cost-effective of the two techniques evaluated.[5]

Shirin Hasanpoor
did a randomized controlled trial among 100 primiparous women who referred to hospitals of Tabriz (Iran) for deliveries were randomly allocated into two groups of 50 to undergo either continuous or interrupt-

ed episiotomy repair. A visual analogue scale (VAS) was used to evaluate pain severity 12-18 hours after episiotomy repair and also 10 days after delivery. Perineal repair rate was also assessed using the REEDA (redness, edema, ecchymosis, discharge, and approximation) scoring scale. The obtained data was analyzed in SPSS15. The results of this study showed that pain severity and episiotomy repair rate were similar in the two methods. Nevertheless, shorter time of repair and fewer threads were required using the continuous repair method. Therefore the authors concluded that this method would provide better services for mothers and reduce the required time, energy, and costs.[6]

Sandra Morano et al. did a randomized controlled trial which included 214 primiparous women with a second-degree perineal tear or episiotomy were randomly allocated to either the continuous knotless technique (CKT; n=107) or the interrupted technique (IT; n=107) suturing method. The authors found the use of a continuous knotless technique for perineal repair to be associated with less short-term pain than techniques with interrupted sutures.[7]

Fouzia Perveen et al.
did a Randomized clinical Trial to compare the outcome of chromic catgut versus polyglactin 910 suture and of continuous versus interrupted suture technique on perineal repair. They found that chromic catgut is still found to be an effective suture material for perineal repair in resource poor countries as the outcome measures are similar to polyglactin 910. Also the continuous suture technique is found to be less costly as less suture material is required without compromising the outcome.[8]

Kettle et al.
did a systematic review to assess the effects of continuous versus interrupted absorbable sutures for repair of episiotomy and second-degree perineal tears following childbirth. The systematic review was concluded by the observation that continuous suturing techniques for perineal closure, compared with interrupted methods, are associated with less short-term pain, need for analgesia and suture removal. Furthermore, there is also some evidence that the continuous techniques used less suture material as compared with the interrupted methods (one packet compared to two or three packets, respectively).9

Hence from the above mentioned various high levels of evidence including a systematic review it can be concluded that a continuous suturing technique as compared to interrupted suturing technique has no significant advantage in terms of the surgical repair outcomes. However the continuous suturing technique seems to be superior in terms of lesser pain .lesser time required and lesser amount of suture material required.

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