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**Cold and Reduced Episiotomy Pain Interfere with Mood and Daily Activity.**

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**Abstract:**

**Introduction:** The interference of acute episiotomy pain with daily activity needs more attention and the application of cold is one method to reduce these complications.

**Materials and Methods:** In this randomized controlled trial, 121 healthy women have been chosen and divided in three groups of control and cold therapy (using pad containing cooling gel and ice pack). Subjects took the sedatives during the first four hours and then based upon the severity of perineal pain. The sedation of pain has been evaluated using numerical rating scale (0-100%) and the interference of pain with ten daily activities has been evaluated using numerical rating scale (0-10) in the first, second, fifth, and tenth days.

**Results:** There is a significant statistic difference in sedation of pain between the three groups in the first, second, fifth, and tenth days and the interference of pain with mood, sitting, babysitting, social activities, urination in the tenth day, defecation in the second, fifth, and tenth day ( $p < 0/05$ ).

**Conclusion:** Pad containing cooling gel acts better than ice pack in reducing the complications of episiotomy.

**Keywords: Cold, Episiotomy, Pain interference, Mood, Daily activity**

**Introduction:**

Episiotomy is one of the minor surgeries on perineum, and perineum is a very

sensitive area, in which there are muscles involved in sitting, walking, bending down, squatting, urination, defecation

(Pillitteri 1995; Karacam 2003), any incision in this area cause pain and disorder. These disorders interfere with resting, sleeping, eating, and babysitting (Pillitteri 1995), therefore has mental, social and physical effects on women (Kettle2004; Enkin2000; Fitzpatrick 2002). In some researches, episiotomy rate has been recorded 73 percent (Cunningham 2005). The perineal pain resulting from episiotomy is a stressful factor in mothers, which interferes with their ability of nursing and doing their duties as a mother and may interfere with urination and defecation (Fernand 2000). Perineal pain may cause mental disorders in mother during postpartum and change her attitude and activities towards her child (McCandlish 2001). According to the reports, the episiotomy pain cannot be estimated and women suffer silently from a preventable pain. There has been a few studies about the perineal damages in Asian populations. Rate of episiotomy is in the Asian women is more than other ethnicities and that is because of the difference of the anatomy and elasticity of the muscles of the pelvic floor. For example, the episiotomy in India is done in more than 90 percent of deliveries and in a recent study is shown to be done in 88.31% of the primiparous women. Since the perineum in primiparous mothers is less elastic, they need episiotomy more than multiparous mothers.

Studies show that women do not want to take care of episiotomy with oral analgesia (Kenyon 2004)

Most of the women are encouraged to take a regular bath and acetaminophen for pain control,. In the developed countries, cold therapy has been used for pe-

rineal pain control. The purpose of using cold therapy is to reduce the period of inflammation and decrease the soft tissue and helping patients to return to their normal activities faster (Bleakley 2004).

Review studies show that topical cold has clear efficacy in reducing pain without delaying wound healing (Fernando 2004; Steen 2000; Boyle 2000). Small ice packs containing normal saline or water have been used widely in other countries to relief pain, decrease inflammation and bruising. However, these ice packs are hard, not comfortable and also cover only a small area of damaged perineum. To solve this problem, Steen et al. (1994) developed a new cooling instrument which was more comfortable (Merrick 2003; Hubbard 2004)The present study has been performed to compare the efficacy of two different cold therapy methods (cooling gel pad and ice pack) with acetaminophen in pain control and comparability of daily activities after episiotomy.

#### **Materials and Methods:**

The present clinical study is a multipurpose research. In this research, After permission from the ethics committee 121 primiparous women who had normal vaginal delivery with episiotomy randomized into three groups (cooling gel pad, ice pack, control) based on the target and randomly divided and followed up pain relief During daily activities and mood changes over five times (days 1,2,5,10). Three groups in terms of pain and need a dose of 325 mg of acetaminophen were taking.

They were followed up for 5 months, AND compare the efficacy of these methods. The pads containing cooling gel were made of propylene glycol (antifreeze) and cellulose compound Felorri Fempad Company, which is similar to sanitary napkins and have a dimension of 23 × 5 × 1.5 centimeters. The ice packs are filled with compressed water and have a dimension 12 × 5 centimeters. Subjects were 16 to 35 year old, had mediolateral episiotomy, giving birth to their child between 37 to 42 of gestational weeks and their child weigh between 2500 to 4000 grams

Exclusion criteria: women with documented medical or psychological disorders, drug or alcohol abuse, twin or more pregnancy, stillbirth, having hematoma or abscess in perineum, manual remove of placenta, massage of perineum using of the gel or cream, postpartum hemorrhage or other disorder (Diabetes, hypertension, dermatitis,...) during period after parturition.

Two cooling instruments (ice pack and cooling pad) were used during the first four hours of post partum. In next 10 days, patients used it whenever they needed. The relieve of the pain of perineum has been evaluated using numerical scale of 0-100 % (0% no relief pain – 100 % complete relief pain) and the interference of pain with daily activities such as mood, walking, sitting, urination, defecation, nursing, babysitting, social

activities, and quality of life were measured with numerical scale (0-10) pain intensity questionnaire the face and content validity confirmed by academic professionals. Validity Numerical rating scale physical pain and mental activity and satisfaction Jensen (2003)  $R = 0.78-0.93$  has been confirmed. Gagliese( 2005) confirmed Numerical rating scale validity psychological characteristics. Followed using reliability observed ( $p < 0.0001$ ,  $r = 0.93$ ). Inferential and descriptive statistics via SPSS.13 software was used for data analysis.

The Kruskal Wallis test and ANOVA were used in this research for statistical analysis.

### **Results:**

Table 1 shows the demographic information of the participants. Subjects did not differ significantly in terms of demographic information, labor stages, episiotomy information, information on child and mother. The results showed that the group used the pad were superior sedated significantly in the first, second, fifth, and tenth (diagram1). The interference of perineum pain had a meaningful difference with mood, sitting, babysitting, social activities, urinating, in the tenth day (Table 2) and defecation in the second, fifth, and tenth days (Table3), but it had not a significant difference with sleeping, nursing, walking, and overall quality of life ( $p > 0.05$ )

Table1: Demographic Characteristics

variables	Gel pad group	Icepack group	Control group	Chi-square test
	N(%)	N(%)	N(%)	
<b>Age(year)</b> 16-20 21-35	19(46.3) 22(53.7)	14(35) 26(65)	13(32.5) 27(67.5)	P=0.39
<b>Education level</b> elementary guidance high school≤	7(17.1) 13(31.7) 21(51.7)	6(15) 15(37.5) 19(47.5)	16(40) 12(30) 12(30)	P=0.056
<b>Employment</b> No employment Work as a paid employee	39(87.8) 5(12.2)	40(100) 0(0)	38(95) 2(5)	P=0.06
<b>Economic level(RI)</b> 1500000≥ 1500000≤	31(75.6) 10(24.4)	28(70) 12(30)	36(90) 4(10)	P=0.08

Table2: Mean score interference with mood and physical activity in 3 groups

Activity 10thday	Gel pad group	Icepack group	Control group	Kruskal wallis test
	Mean± SD	Mean± SD	Mean± SD	
<b>Mood</b>	0.89±1.39	1.45±1.83	1.80±2.12	P=0.048
<b>Sitting</b>	1.46±1.86	2.23±1.98	2.69±2.53	P=0.049
<b>Hold the baby</b>	1.12±1.76	2.11±2.04	1.91±1.91	P=0.025
<b>Relation together</b>	0.64±1.11	1.22±1.45	1.44±1.79	P=0.047
<b>urination</b>	0.94±1.41	2.31±2.57	2.41±2.45	P=0.011

Table3: Mean score interference of pain with defecation in 3 groups

Defecation	Control group	Icepack group	Gel pad group	Test
	Mean± SD	Mean± SD	Mean± SD	
<b>2nd day</b>	5.39±3.59	5.13±3.95	3.63±3.85	#p=0.044
<b>5th day</b>	3.78±2.82	4.69±3.24	2.74±2.92	*p=0.021
<b>10thday</b>	2.86±2.64	2.74±2.68	1.10±1.51	#p=0.002

# Kruskal wallis, \*ANOVA

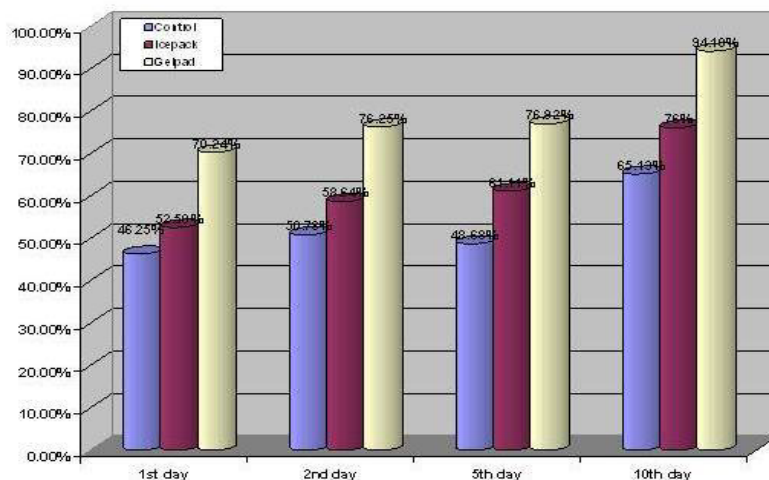


Diagram1: relief pain of Episiotomy

**Discussion:**

Episiotomy is an minor surgery having physiological, mental, social and economical effects on women, therefore both operational procedure and quality of postpartum care is very important. The interference of acute pain with daily activities has been paid less attention (Zalton 1999). Just a few studies have been performed to evaluate the relation between acute pains with impairment of usual daily activities. In the present research, the interference of pain has been evaluated with ten physical, mental, and social activities, in the first, second, fifth, and tenth day of delivery, using quantitative (numerical rating) scale. The results indicate that the interference of pain with mood, sitting, urination, in the tenth day, defecation in the second, fifth, and tenth days, babysitting, and social activities in the tenth day has a significant difference in three groups in favor of cooling gel pad ( $p=0.047$ ).

The research of Rockner showed that the women who had mediolateral episiotomy had more pain in the third week after childbirth, on sitting, walking, urination and defecation (Woolley 1995). In our research that the women who had mediolateral episiotomy Use of cooling equipment was useful for reducing pain .

Corkill (2001) used lignocaine gel to reduce the pain of perineum after delivery; and evaluated the pain of two groups during sitting and lying back, but there was no statistical difference between two groups upon 48 hours after delivery.

Dodd (2004) evaluated the effect of two dosage of suppository of Diclofenac to relief pain of perineum in the first 24 and 48 hours and the tenth day and six

weeks after delivery to cure the pain of perineum and assessed the pain of perineum during walking, sitting, and urination. The results show that Diclofenac was effective only for the first 24 hours during walking, sitting, urination and defecating, but not in the second, tenth, and the six weeks after the delivery between the 2 groups.

In the report of the researchers who the results indicated that the pain reduced, during rest (22+21), sitting (51 + 25), walking (37 + 24), and defecation (21 + 21).

In the researches of Steen et al, pain has been evaluated with three activities of walking, sitting, moving in bed with quality scales (without pain, mild pain, moderate pain, acute pain) in the first, second, third, fifth, and tenth days, but the results has not been provided to used in this research.

**Limitation**

It was impossible to blind the women as to what treatment they would be applying to their perineum. The difference in shape, size and texture of the cooling treatments and a clear 'no treatment' group made informing the women unavoidable.

**Conclusion:**

The cooling gel pad is a useful way to relief perineal pain after episiotomy and reduces the interference of pain with some mental, social and physical activities to reduce the complications of perineum trauma.

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