

EFFECTIVENESS OF DATES AND HONEY OF THE FIRST STAGE OF PROLONGED LABOR

Mundarti¹, Esti Handayani², Bekti Yuniyanti³, Wahyu Pujiastuti⁴

ABSTRACT

Background The delivery process can lead to prolonged labor elongated influenced by the amount of intake during labor. One of the food sources that contain high calories is dates and honey. High glucose content on a date benefit to labor needed to be straining. Serotonin, tannin and oxytocin helps smooth muscle contraction of the uterus and shortens bleeding time. Besides dates contain oleic and linoleic contribute to the provision of prostaglandins that serve to strengthen and stretch the muscles of the uterus. Honey is fructose and glucose can enter the bloodstream directly, and is a source of instant energy for the body.

Purpose The purpose of this research was to determine the effectiveness of dates and honey to the first stage of labor longer active phase

Methods :The study was conducted in Waterford, This study uses a quasi-experimental design Posttest Only Control Group Design. The study population 82 mothers who gave birth in July until November 2019 with a random sample of 72 side which met the inclusion criteria

Results The Provision of dates is very effective in speeding up the opening of the first stage of labor is the active phase as compared to the provision of sugar liquor with a P value: 0.027 (> 0.05). Giving honey is very effective in speeding up the opening of the first stage of labor is the active phase as compared to the administration of fluids with P sugar: 0:03 (> 0.05). Provision of dates is very effective in accelerating the opening stage 1 compared with fluid honey with a P value: 0.008 (> 0.05).

Conclusion Expected midwife and patient use of honey and dates instead of sugar to prevent prolonged labor and bleeding

Keywords: Dates, Honey, Sugar, Childbirth

I. INTRODUCTION

Maternal Mortality Rate (MMR) is one of the indicators that are sensitive to the quality and accessibility of health care facilities. MMR (relating to pregnancy, childbirth, and postpartum) of 359 per 100,000 live births by cause of death was bleeding in the amount of 30.3% (Kemenkes RI, 2015) „Childbirth is a very important event in the lounge by each couple. (Maryunani, 2010).

^{1, 2, 3, 4} *Departemen of Midwifery, Poltekkes Kemenkes Semarang Indonesia,*

Correspondent Email: mundaramli@yahoo.co.id

Childbirth is affected by the 5 important factors known as 5 P, passenger, passage, power (force pushing the fetus out who covers his / strength of the uterus, contractions of the abdominal wall, contraction of the diaphragm and the ligament action), position and psychological balance factor of 5 P can help create a normal delivery went smoothly. Disorders of the factors can cause the mother 5P difficult labor (Saifuddin, 2007). Duration of labor is the length of time required primiparous and multiparous mothers in the process of opening and thinning of the cervix, and the fetus down into the birth canal at stage I. Kala first active phase of the opening of 4 cm to the complete opening (10 cm), will take place with average speed average 1 cm per hour (nulliparous or primigravidae) or more than 1 cm to 2 cm in multiparas (JNPK-KR 2017)

The duration of labor that occurs in the first stage is the final phase of a labor that lasted too long causing symptoms such as dehydration, infections, exhaustion asphyxia and maternal and fetal death in utero / Intra Uterine Fetal Death (Saifuddin, 2010). The process of extending first stage of labor can lead to prolonged labor. (Oxorn, 2010). During labor, aerobic and anaerobic metabolism of carbohydrate will meningngkat continuously caused by anxiety and muscle activity of the body. This is reflected by an increase in body temperature, heart rate, respiration, cardiac output and fluid loss. The increase in cardiac output and fluid loss will affect renal function, so that the necessary attention and action to prevent dehydration (Spiritual, Saswita and Marisah, 2011).

Oral intake of food and drinks are needed by women giving birth to recruit and fatigue which can result in dehydration. In addition, the intake of nutrients makes an indispensable contraction in expenditure baby, so that the entire birthing process more efficient (Soegeng 2004 , Suroso Paryono, 2016). According to Fraser (2009) there was a shift from care may not provide food and drinks to the mother during labor, turned into a given food and drinks are easy to digest

Dates contain nutrients that are very good and the sugar contained in the palm fruit can be directly absorbed by the body. Palm juice containing the hormone oxytocin can help stimulate muscle contraction in the uterus, thus simplifying the delivery .. (Khasanah, n, 2011). Some compounds that have in the palm fruit, among others carbohydrates, calcium, vitamin B complex, potassium, magnesium and iron. In setiap 100 grams of dates contains 50 IU of vitamin A, thiamine 0.09 mg, 0.10 mg riboflavin, niacin 2.20 mg and 666 mg of potassium and salicylate. Potassium content makes semangkin pulse becomes irregular and a contraction of muscles that help stabilize blood pressure. Salicylate in dates can lower the risk of developing blood clots (platelet). High glucose content beneficial to labor needed to be straining. Serotonin and tannins help smooth muscle contraction of the uterus as well as shortening the time perdarhan. Besides palm oleic and linoleic mengandung that contribute to the provision of prostaglandins that serve to strengthen and stretch the muscles of the uterus also contains oxytocin can make the contractions more effective .. (Khasanah, n, 2011) Rostita. (2012).

Honey is a type of monosaccharide. Monosaccharides / simple sugars can enter the bloodstream directly, so it does not need to be metabolized (amazine, 2015). Honey is the natural sweet substance produced by bees from the nectar of flowers raw materials. Substances contained in honey are glucose, fructose, maltose, sucrose, carbohydrates, enzymes diatase, the enzyme invertase, and dyes which vary depending nectar (Purbaya, 2007). One tablespoon of sugar or sucrose contains 46 calories, while one tablespoon of natural sweetener honey has 64 calories

(Goshen, 2015). The glucose in honey is efficacious restore body fluids quickly. Fruktosanya may reduce liver damage. Diatase invertase enzyme and reduce the starch, protein, and glycosides excessive in the body (Purbaya, 2007)

Honey has a main component of glucose and fructose (Rostita, 2007), so the honey the power and endurance enhancer supplements themselves during pregnancy and at the time before the birth of the baby (Anonymous, 2015). Pure honey contains Prostagelandine substance capable of accelerating contraction of the muscles of the uterus and cervix dilated make space so as to facilitate the acceleration of labor (Alif, 2014).

The phenomenon which has seen the author in Temanggung Parakan Mother Midwife Practice on maternity is to comply with the calorie intake of sugar water are usually mixed with tea or milk Based on the above phenomenon, the authors are interested in examining "the effectiveness of dates and honey on the duration of labor"

II. METHODOLOGY

Research methods used in this research is quasi experiment with design *Posttest Only Control Group Design*, The purpose of this study was to determine the effectiveness of long dates and honey to the first stage of labor and maternal second time. The study population 82i maternal in Bunda Clinic Parakan with a sample of 72 women giving birth with the technique with random sapling qualified inclusion, Analysis of the data by using test *T*

III. RESULTS AND DISCUSSION

The results of the 72 samples taken at random consisting of 24 respondents with the intervention of dates and 24 respondents with the provision of 24 respondents dg palm and sugar as the control liquid obtained as follows.

Table 1, Old kala 1 each opening 1 cm by intervention

Kala 1	N	Minimum	maximum	mean	SD
date	24	4	67.5	32.85	19:05
Honey	24	15	70	29.39	15.61
Sugar	24	20	60	41.45	20.69

According to the table 1 long stage 1 each opening 1 cm minimum is achieved for 4 minutes on the granting date which is the fastest time in reaching the opening rather than the use of honey and liquid sugar. This is reinforced by the results of average achievement per cm opening in the first stage liquid honey 1 Award for 2939 minutes showed faster than fluids with an average sugar reached 41.45 minutes at the opening of 1 cm. The results are consistent with research Kordi (2010) also showed that labor occurs within the group given normal treatment honey syrup.

Glucose can be beneficial to increase red blood cell (Aswani 2010). Red blood cells can only use glucose .. red blood cells obtain their energy through glycolysis, namely conversion of glucose into pyruvate. Pyruvate to be released into the blood directly or converted into lactic later released. Red blood cells can not survive without glucose. Without red blood cells, most tissues of the body will suffer from a lack of energy for tissue needs oxygen to be able to perfectly convert fuel into CO₂ and H₂O. With the increase in red blood cell that can increase fuel is useful for birth mothers, results of this study supported by the results of research ahmadwithresults within a run in the Run-2 covered by the subject in the experiment drinks honey (3420 ± 350 m) was significantly (P <0.01) longer than ordinary water experiments (3120 ± 340 m). These findings indicate that rehydration with honey drinks improve performance to run and glucose metabolism compared to normal water in the heat. Thus, honey drink can be recommended for the purpose of rehydration for athletes competing in the heat.

Table. 3. Effectiveness Granting Dates and Sugar (Control) On Delivery

Kala 1			
	Normality Test Data		test T
	P.Value	normality	
date	0.395	Normal	0027
syrup			

T test results obtained Sig.0.027 value <0.05 showed no difference between the water supply of honey and sugar water to the first stage of labor longer active phase. It can be concluded granting of dates is very effective in accelerating the first stage of labor longer active phase, compared with sugar fluid administration. The results of this study confirmed the achievement of every 1 cm opening in the delivery date which shows the mean of 3.25 faster than the old water supply sugar to the active phase of the mean time 1 minute 3.607

Table. 4. Effectiveness Granting Honey and Sugar (Control) On Delivery

Kala 1			
	Normality Test Data		test T
	P.Value	normality	
Honey	.466	Normal	0023
Sugar			

T test results obtained when the value of one labor Sig.0.023 who shows the honey treatment was very effective in speeding up the opening of the first stage of labor compared with sugar fluid administration, with a mean value of

31.2667 minutes long first stage of labor is the active phase faster than the honey treatment, with a value of achievement 41,4583. menit mean every opening 1 cm

Tabel.5. Effectiveness Granting Dates and Honey In Childbirth

Kala 1			
Normality Test Data			test T
	P.Value	normality	
date	0251	Normal	0008
Honey	0101	Normal	

Based on the obtained value of T test Sig.0.008 <0.05 showed no difference between giving dates and honey to the first stage of labor longer active phase of dates It can be concluded giving very effective in speeding up the opening of the first stage of labor is the active phase at each opening 1 cm achievable with average 2.9324 average faster than the honey treatment with the average reached 3.4734 minutes each opening 1 cm ..

The results of this study supported by the results of first stage of labor long with honey water supply most of 17 respondents (65.4) faster than the average duration of labor. In contrast to the administration of most of the sugar water as much as 17 respondents (60.7%) experienced long delivery time was slower than the average time when 1 in every opening of 1 cm. Similarly, the second stage of labor old mother who gave birth to most of them were faster than the average duration of prolonged labor stage 2 as much as 16 respondents (61.53%)The results are consistent hacyl research Sari (2010) also showed no effect of pineapple fruit consumption by pregnant women against uterine contractions during labor (p value = 0.023). Pineapple can speed up the delivery process because it contains enzymes that stimulate the production of prostaglandin Bromealin.

The process of extending first stage of labor can lead to prolonged labor (Oxorn, 2010). During labor, aerobic and anaerobic metabolism of carbohydrates will increase continuously. This increase is largely due to the anxiety and muscle activity of the body. This is reflected by an increase in body temperature, heart rate, respiration, cardiac output and fluid loss. The increase in cardiac output and fluid loss will affect renal function, so that the necessary attention and action to prevent dehydration (Spiritual, Saswita and Marisah, 2011).

The results of this study reinforced with Solihian research at all the effects of natural honey supplementation on plasma cytokine levels during the 10-week treadmill training in athuna-trained athletes showed Cy-Tokine reduce inflammation. The mechanism for the effects of inflammation triggers hypoglycemia, low muscle glycogen, muscle damage, oxidative (OS), or stimulation of immune cells ..Sugar is a carbohydrate that is a source of eneRGI and raises sweetness. By eating the sugar water in the morning, can increase energy quickly, because the sugar into the body will be turned into glucose and absorbed by the body then produces energy (Anonymous, 2016). Sugar containing sucrose 100% Sucrose on sugar comprising two molecules bound together. When we consume sugar stomach using enzymes to break these molecules, before the body uses energy (amazine, 2015).

Hasil penelitian ini menunjukkan bahwa madu dapat meningkatkan tenaga sehingga dapat mempercepat proses persalinan. Menurut Purbaya (2007) madu merupakan zat manis alami yang dihasilkan lebah yang berasal dari bahan baku nektar bunga. Zat yang terkandung dalam madu adalah glukosa, fruktosa, maltosa, sukrosa, karbohidrat, enzim diatase, enzim invertase, dan zat warna yang bervariasi, bergantung nektar bunga. Satu sendok makan gula pasir atau sukrosa mengandung 46 kalori, sedangkan satu sendok makan madu pemanis alami memiliki 64 kalori (Gosyen, 2015). Glukosa dalam madu berkhasiat mengembalikan cairan tubuh dengan cepat. (Purbaya, 2007)

Dates contain nutrients that are very good and the sugar contained in the palm fruit can be directly absorbed by the body. Sugar content in different palm fruit with the sugar content in other foods, because other fruit sugar content, usually must be described first and absorbed by the body. Palm juice containing the hormone oxytocin can help stimulate contractions of the muscles of the uterus, making it easier for labor. (Khasanah, n, 2011) The results of research Suroso, Paryono (2016) showed no effect between kosumsi palm juice on a regular basis at the end of pregnancy, labor progress the first stage in primiparous with the results of the $t - 3,234 > t$ table 2002. This is reinforced by the results of research Astuti, LP et al (2018) showed no significant effect on the progress of palm juice the active phase of the first stage with P value primigravidae 0,020 < 0.05 with the average for the first stage of labor for the control group and the intervention group 233.00 253.67. Another similar research is conducted is done by Rosyidah NN.Kiftyah (2018), a young date palm extract proves effective against the acceleration of the first stage of labor with a significance value of 0.035 with a mean duration of labor of the first stage to a control group of 930 and for the experimental group. amounted to 787.14 .. The results Mutiah C (2018) found no differences in the duration of labor in a shorter treatment group (11.23) control group (112.09). 00. Another similar research is conducted is done by Rosyidah NN.Kiftyah (2018), a young date palm extract proves effective against the acceleration of the first stage of labor with a significance value of 0.035 with a mean duration of labor of the first stage to a control group of 930 and for the experimental group. amounted to 787.14 .. The results Mutiah C (2018) found no differences in the duration of labor in a shorter treatment group (11.23) control group (112.09). 00. Another similar research is conducted is done by Rosyidah NN.Kiftyah (2018), a young date palm extract proves effective against the acceleration of the first stage of labor with a significance value of 0.035 with a mean duration of labor of the first stage to a control group of 930 and for the experimental group. amounted to 787.14 . The results Mutiah C (2018) found no differences in the duration of labor in a shorter treatment group (11.23) control group (112.09).

Some compounds that have in the palm fruit, among others carbohydrates, calcium, vitamin B complex, potassium, magnesium and iron. Potassium content makes semangkin pulse becomes irregular and a contraction of muscles that help stabilize blood pressure. Salicylate in dates can lower the risk of developing blood clots (platelet) for the antiplatelet besifat. High glucose content beneficial to labor needed to be straining. Serotonin and tannins help smooth muscle contraction of the uterus as well as shortening the time perdarhan. Besides palm oleic and linoleic mengandung that contribute to the provision of prostaglandins that serve to strengthen and stretch the muscles of the uterus. Also containing oxytocin can make the contractions more effective

IV. CONCLUSION

1. Provision of dates is very effective in speeding up the opening of the long first stage of labor is the active phase as compared to the administration of fluids sugar with a P value: 0.027 (> 0.05)
2. Giving honey is very effective in speeding up the opening of the first stage of labor longer active phase than that of sugar liquor with P: 0:03 (> 0.05)
3. Provision of dates is very effective in speeding up the opening of the first stage of labor longer active phase as compared to the water supply of honey with a P value: 0.008 (> 0.05)

V. SUGGESTION

1. It is expected that the midwife to use dates and honey as a sugar substitute in accelerating the first stage of labor time during the active phase of labor helps to prevent the occurrence of prolonged labor figures that can reduce maternal mortality and infant
2. Expected at birth mothers to use honey dates as a substitute for sugar in accelerating the first stage of labor longer active phase at the time attending births

REFERENCES

- [1] Aden R. (2010). Benefits and Benefits of Honey: Natural Wonders of the Architect. Yogyakarta: Creators hangar.
- [2] AhmadNSetal., EffectsofPost-Exercise Honey Drin kIngestionon Blood Glucose and *Subsequent Running Performance in the Heat*, *AsianJSportsMed*.2015; 6 (3): e24044
- [3] Alif. (2014). Alif honey.<https://www.tokopedia.com/barata/batu-cempaka-madu-alif-asihan>,
- [4] Amazine. 2015 Sugar with honey, which is healthier ?.<http://www.amazine.co/115/gula-dengan-madu-mana-lebih-sehat/>
- [5] Anggraeni,AD.,2013,Pengaruh Konsumsi Minuman Madu Terhadap Kadar Glukosa Darah Atlet Sepak Bola Remaja Selama Simulasi Pertandingan, *Jurnal of Nutrition college.vol.2.No.3* <http://garuda.ristekdikti.go.id>
- [6] Anonim. 2016. *Khasiat Madu Untuk Janin dan Ibu Hamil*. <http://maduhutankalimantan.com/khasiat-madu/khasiat-madu-untuk-janin-dan-ibu-hamil/>.
- [7] Arikunto. 2010. *Prosedur Penelitian Suatu Pendekatan Praktek*. Jakarta : Rineka Cipta.
- [8] Aswani V. 2010. *How Well Do You Understand Blood Glucose Levels?*. Available from: <http://www.medscape.com/viewarticle/438144>
- [9] Dinas Kesehatan Jawa Tengah. (2015). *Profil Kesehatan Propinsi Jawa Tengah 2014*. Semarang: Dinas Kesehatan Jawa Tengah.
- [10] Fraser, Diane, M. dan Cooper, M. A. 2009. *Buku Ajar Bidan Myles*. Jakarta : EGC.
- [11] Gosyen. 2007. *Gula Vs Madu*. <http://www.gosyenland.com/front/artikel-dan-berita/madu-dan-lebah/14-madu-vs-gula>,
- [12] Hamad, S. 2007. *99 Healthy Recipes with Honey*. Jakarta: Citation II Man
- [13] Hidayat AA 2010. *Midwifery Research Methodology and Data Analysis Techniques*, Jakarta, Salemba Medika
- [14] MoH RI. *Infodatin 2015: Data and Information Center of the Ministry of Health*. Jakarta: Ministry of Health RI.
- [15] *Khasanah*, N (2011). content of fruits in the Qur'an to health. *jurnalphenomenon*, 5-29.
- [16] Kordi. 2010. The Effect of Oral-Date Honey Syrup Intake During Labor on Labor Progress of nulliparous Women. *Iranian Journal of Obstetrics, Gynneocology and Infertility*, June-July 2010, Volume 13, Number 2; Page (s) 23 To 30.
- [17] Maryunani. 2010. *Pain in Childbirth*. Jakarta: Trans Media Info.

- [18] Mutiah, 2018, Effect of palm juice (dactiliferan phoenix) at birth mothers of the first stage towards the duration of labor in Puskesmas Langsa Baro, Scientific Medical Journal Nasuwakes Vo.II 1, p 27-31
- [19] Oxorn and Forte. 2010. Pathology and Physiology Obstetrics Childbirth. Yogyakarta: Andi Offset.
- [20] Purbaya, JR 2007. Recognizing and Utilizing Natural Honey Benefits. Bandung: Publisher Pinonir Jaya.
- [21] Rahayu RD, 2017, the addition of Sari Kurma Effectiveness of Compliance Nutrition In Pregnancy Anemia In Puskesmas Wedi, Klaten regency, Kebianan and Traditional Health Journal, Volume 2, No.2, September pp 97-103
- [22] Spiritual, Reni Saswita and Marisah. 2011. Midwifery Care at the Time of Delivery. Jakarta: Salemba Medika
- [23] Rostita. 2007. Thanks to Honey, Healthy, Beautiful and Full of Vitality. Bandung: Qanita
- [24] Rostita. (2012). efficacy and wonders palm juice. Bandung.
- [25] Rosyidah,N.N.,Kiftiyah,(2016))efektifitas pemberian ekstrak kurma mudda terhadap percepatan persalinan, jurnal keperawatan dan kebidanan, diunduh dari.
- [26] Saifuddin. 2007. Buku Acuan Nasional Pelayanan Kesehatan Maternal dan Neonatal. Jakarta : YBP-SP.
- [27] Soegeng,S. 2004. *Kesehatan dan Gizi. Jakarta: Rineka Cipta*
- [28] Solihian O,Rashidi M,Sadaghat M, Oral supplementation of natural honey and levels of inflammatory and anti- inflammatory plasma cytokines during 10-week of intensive tread-mill training in endurance-trained, Biomedical Research 2014; 25 (4): 459-462
- [29] Suroso, Paryono, 2016, Influence of Consumption Sari Kurma In Final Stage of Labor Pregnancy Progress Against I and Total Bleeding At Childbirth In primiparas in Puskesmas Klaten, Journal of Integrated Health Sciences, Volume 5, No.1 pp 41-45
- [30] Varney, H. 2008. Textbook of Midwifery Care. Vol 2. Jakarta: EGC.Osken, A., Yaylaci, S., Aydin, E., Kocayigit, I., Cakar, M.A., Tamer, A., Gündüz, H.Slow ventricular response atrial fibrillation related to mad honey poisoning(2012) Journal of Cardiovascular Disease Research, 3 (3), pp. 245-247.
- [31] Sattar, M.A., Achanta, S.Development and validation of a simple method for simultaneous estimation of memantine and donepezil in pharmaceutical dosage forms by using RP-HPLC(2018) International Journal of Pharmaceutical Research, 10 (2), pp. 155-166. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85047180094&partnerID=40&md5=70e751d0774abdf0e256af0ff3fa4940>
- [32] Khan, A., Khushnood, S.Simple and Efficient Blood Glucose Measurement Technique Using Non Invasive Artificial Intelligence(2017) Bonfring International Journal of Industrial Engineering and Management Science, 7 (1), p. 9.
- [33] Grondin, S., Bisson, N., Gagnon, C., Gamache, P.-L., Matteau, A.-A.Little to be expected from auditory training for improving visual temporal discrimination (2009) NeuroQuantology, 7 (1), pp. 95-102.
- [34] Dr. Jafar A. Alzubi, Dr. Omar A. Alzubi, Dr.G.Suseendran, Dr.D.Akila “+A novel Chaotic map encryption methodology for image cryptography and secret Communication with steganography- International Journal of Recent Technology and Engineering, Vol.8(1C2), May 2019, pp.1122-1128
- [35] Teoh Joo Fong, Azween Abdullah, NZ Jhanjhi, Mahadevan Supramaniam, “The Coin Passcode – A Shoulder-Surfing Proof Graphical Password Authentication Model for Mobile Devices”, in International Journal of Advanced Computer Science and Applications (IJACSA), Vol 10, No, 1, pp. 302-308, 2019