

**THE DIFFERENT HEALING TIME OF CIRCUMCISION
WITH ELECTRIC CAUTER AND CONVENTIONAL
METHOD HELD IN GENTENG – BANYUWANGI.**

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Abstract :Process of sircumsisi will affect at hurt appearance at penis. Meanwhile method of sircumsisi or of khitan which is often conducted among others is convensional method and cauter electric.This research is aimed to know difference of long healing of hurt of sircumsisi convensional method and method of electric cauter. Design is used this research use compares design. Population in this reseach is all child which is sircumsisi with convensional method and cauter electric which enter criterion of inclusion with amount of sample 20 responder. Techniques of sampling utilize Quota sampling. Appliance for the process of data collecting is observation sheet, is hereinafter analyzed with statistical test of Franc of Willcoxon with $\alpha = 0.05$. result of research known that long healing of hurt at responder of sircumsisi with convensional method, at phase of homeostasis some of responder (50%), healing of its tady hurt. At inflammation phase, most responder healing of its tardy hurt (60%) and at phase phase of prolifiration most responder healing of its tardy hurt (60%). Meanwhile for the healing of hurt of sircumsisi at method of electric entirety cauter (100%) in category quickly. From statistical analysis got that value $p = 0.046 < \alpha = 0.05$ with the meaning there is difference of long healing of hurt of sircumsisi conventional method and cauter electric in Region District Of getting Sub-Province of Banyuwangi Year 2015. Result of research indicate circumcision method recover quickly. Suggestion to give all old fellow and offcer of health, when doing sircumsisi to chosen method of electric cauter.

Key word : Sicumsisi, method of sircumsisi, healing of hurt,

1. INTRODUCTION

Circumcision (khitan) is the surgical removal of the foreskin. It is traditionally committed in our history. The tradition has already been with ancient people of Mexico as well as people of Africa continent. It is aimed as a measure to protect the children from any bacillus that may attack the tissue covering the head (glans) of the penis.

Circumcision is closely related to a culture of Semitik (Jewish, Cristian from Koptik sect, and Islam), which still works till today (Salabi,2001).

On the process of Circumcision a little cut is made on the tissue covering the head(glans) or preposium of the penis. The circumcision method which is commonly applied is conventional and electric cauter method.

Either the process of Circumcision causes similar pain with only differences on the tools and healing time.

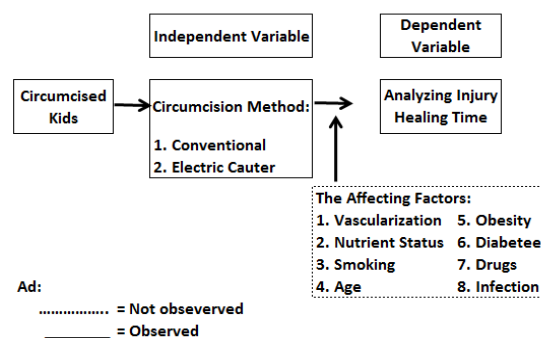
From the previous study done in Banyuwangi most circumcision are done through electric cauter, though some are still with conventional method. From the 10 circumcision operator (doctor) in Genteng area most 67% use electric cauter.

The data shows that from the 3 kids having electric cauter method and the other 3 kids with the conventional ones find different time of healing. Where the ones with electric cauter got better sooner.

This research studies about the healing time of circumcision with both electric cauter method and conventional. However healing term is just limited to proliferasi phase. It is due to the wound at this phase shows granulation with bright reddish, smooth ruffle base, not easy bleeding. However it takes to 2 years to observe the healing at the phase of maturation.

The purpose of this research is to analyze the different healing time of circumcision with electric cauter and conventional method held in Genteng – Banyuwangi.

2. Method of Research



(Source: Hidayat, 2003)

Framework of the differences on Injury Healing Time of circumcision through Conventional and Electric Cauter method in Genteng - Banyuwangi in 2010

“The research design applied on this study is comparative study where this research compares between two main variables”. (Hidayat, 2013). The population in this research are all the kids having circumcised by conventional and electric cauter in Genteng-Banyuwangi. The sample of the research are 20 inclusive respondents. Data collection is done through observation papers.

The gathered data is analyzed using statistical check by Frank Willcoxon with $\alpha = 0,05$, with the help of SPSS as $\rho < \alpha$ so H_0 rejected, it means there is no difference of healing time on circumcision by conventional or electric cauter in Genteng – Banyuwangi.

3. Data Result

a. General Data

1. Table of Respondent Characteristic Distribution based on age

Age	Frequency	Prosentage (%)
9	4	20
10	7	35
11	3	15
12	6	30
Total	20	100

Based on the above table we know that the respondents are between 9 to 12 years of age. The respondents are distributed evenly, with the major 10 years are 7 persons (35%), and some of 11 years old are 3 persons (15%).

2. Table of respondents distribution based on parents job

Parents Job	Frequency	Prosentage (%)
Merchants	7	35
Farmer	6	30
entrepreneur	4	20
Government Officer	3	15
Total	20	100

Based on the above table we know that most respondents' parents are merchants 7 persons (35%) and some of 15% are government officers (3 persons).

3. Conventional and Electric Cauter Method Distribution of frequency of Conventional and Electric Cauter Method on July 2015 in Genteng – Banyuwangi.

Method	Frequency	Prosentage (%)
Conventional	10	50
Electric cauter	10	50
Total	20	100

Based on the table above we learn that 10 kids (50%) circumcised by conventional method.

4. Distribution of Healing Time of Circumcision Injury by conventional method On July 2015 in Genteng Banyuwangi.

Wound healing Phase	Time	Frequency	Percentage (%)
Homeostasis	Fast	5	50
	Slow	5	50
	Total	10	100
Inflammation	Fast	4	40
	Slow	6	60
	Total	10	100
Proliferation	Fast	4	40
	Slow	6	60
	Total	10	100

5. Distribution of Healing Time of Circumcision Injury by Electric Cauter method On July 2015 in Genteng Banyuwangi.

Healing Of Hurt Phase	Time	Frequency	Percentage (%)
Homeostasis	Fast	10	100
	Slow	0	0
	Total	10	100
Inflammation	Fast	10	100
	Slow	0	0
	Total	10	100
Proliferation	Fast	10	100
	Slow	0	0
	Total	10	100

6. The healing time of circumcision injuries through conventional and electric cauter Method in Genteng shows as follow

Time Healing Of Hurt Phase	Time	Convensional		Electric cauter	
		f	%	f	%
Homeostasis	Fast	5	50	10	100
	Slow	5	50	0	0
	Total	10	100	10	100
Inflammation	Fast	4	40	10	100
	Slow	6	60	0	0
	Total	100	10	10	100
Proliferation	Fast	4	40	10	100
	Slow	6	60	0	0
	Total	10	100	10	100

ρ value 0.046

4.2 Data Analysis

Data Analysis is the process organizing the data sequences to a certain pattern and basic sequence (Patton quoted by Maleong, 2013).The researcher recheck the gathered data to see the whole contents.

According to Djawanto (2001) the process of data testing is done by formulating Statistical Hypothesis (H1). The Statistical Hypothesis (HI) : $\mu_1 \neq \mu_2$ which means there is difference on the healing time on circumcision injuries through conventional and electric cauter method in Genteng – Banyuwangi in 2015. The appropriate statistical testing is by Frank *Wilcoxon* with significance of $\alpha = 0,05$. The testing criteria says that if the value of statistical test $\rho \text{ value} < \alpha 0,05$ so H1 is accepted, and conversely if the value of statistical test $\rho \text{ value} > \alpha 0,05$ so H1 is rejected. The counting of statistical value ρ

value with the help of SPSS program of 16,0 for windows. The conclusion of testing to determine if H1 is either accepted or rejected by seeing p value compared to α .

4.3 Discussion

Based on table 4.4 above it is known that the circumcision methods applied on the respondents are conventional and electric cauter. 10 kids (50%) circumcised conventionally while the other 10 (50%) are done by electric cauter.

Literally circumcision means to cut, seen from the terminology it means to cut the tissue covering the head (glans) or preposium of the penis. In Arabic circumcision is used as other name of genitals such as written on hadits "apabila terjadi pertemuan dua sirkumsisi, maka telah wajib mandi" (H.R. Muslim, Tirmidzi, dll) (Niam, 2014).

Types of Circumcisions First type is Conventional, where it is still mostly applied in our people Indonesia. To cut the tissue covering the head (glans) or preposium of the penis done with sharp scissors and clamp. And it causes much bleeding so it takes around 30 to 45 minutes to work it out.

Second type is electric cauter, where the cut is done by burning flat sharp wire through electrical current. The instrument looks like a soft gun where two flat sharp wires are interconnected each other and gets burned with electrical current. And it is used to cut the tissue covering the head (glans) or preposium of the penis. It relatively takes a short time with little bleeding, And it needs knitting to avoid much bleeding. Having been circumcised the kids may have normal activities, (Hana, 2014).

Based on those 2 above definitions it shows clear differences between the two circumcision methods. The differences show not only on the instruments used, the procedures but also on their effects.

Based on the table 4.7 above it shows the healing time of conventional method at homeostasis phase is 50% (5 kids) relative short. While at inflammation phase 60% (6 kids) have slow healing time. At electric

cauter method, on the other hand, all the 10 kids (100%) have quick healing time at the phase of homeostasis, inflammation, and proliferation.

Based on the statistical analysis using Frank Wilcoxon test the data shows p value = $0.046 < \alpha 0.05$ which means a difference of healing time on conventional and electric cauter methods done in Genteng – Banyuwangi in 2015.

We have several phases of healing time after circumcision. The first is Hemostasis, where the wound healing is to block the blood vessels on the cut using platelet. The blood vessels will constrict in response to the injury, while platelet secreting the Vasoconstrictive substance to help the process.

Under the effect of *adenosin diphosphat (ADP)* a leak on the tissues cut will arouse platelet aggregation through trombin production that forms fibrin of fribnogen. The attach of fibrin is strengthened by platelet aggregation that turn to a stable hemostatic. Platelet also secreting sitokin such as "*platelet-derived growth factor*". Hemostatic happen in several minutes after injury except at the blood blocking disturbance.

The second phase is inflammation. Clinically inflammation is the second phase of the healing process that brings eritema, swollen and the increase of body temperature which is often related to the pain in classic. "*rubor et tumor cum calore et dolore*". This phase may last in four days after injury. The debris cleaning/cleansing takes place at this healing time phase. And this is to be work of PMN's (*polymorphonucleocytes*).

Inflammation response causes leak on the blood vessels that produces plasma and PMN's around the tissue. Neutropil fagositosis the rest of mikroorganism and to be the early defense to an infection helped by local mass cells. Then fibrin leaks out as a part of this cleansing. Makrofrag cell plays as agent of this wound healing. Makrofrag is able to fagosit bacteria and to be the second defense. Makrofrag also secretes various komotaktik and Fibroblast Growth Factor

(FGF), Epidermal Growth Factor (EFG), Transformation Beta Growth (TGF) and interleukin-1 (IL-1).

The third phase is Proliferation (Proliferation, granulation and contraction). Granulation phase begins at the day 4 after treatment, and for serious injury it usually lasts until the day 21 based on the size of the wound. Clinically it is marked by red tissues at the bottom of the wound and change the dermal tissues and sometimes subdermal on one cleansing debris, and new tissues is formed under contractor.

The frame is fulfilled by fibroblast secreting collagen on dermal that lead to regeneration. The role of fibroblast is to contraction. The soft tissues are perisit cells that generate out layer of capillary and endothelial cells forming a line. This process is called *angiogenesis*. "roofer" and "sider" are Keratinocytes cells responsible for epithelization. At the last phase of epithelization contraction happens where Keratinocytes differs to form outer protective coating or stratum korneum. The time healing on electric cauter is shorter as hemostasis begins earlier so that the following phase occurs sooner (Aminetn, 2014).

Based on the obtained data, it is concluded that the healing time period differs between the conventional and electric cauter methods. The healing time at homeostasis phase is shorter on electric cauter method compared to the conventional ones. This is caused by the blood blocking work faster to stop bleeding that follows by acceleration on other phases.

5. Conclusion and Suggestion

a. Conclusion

- 1) Respondents treated by conventional and electric cauter method are 10 kids (50%) for each.
- 2) The healing time on circumcision to the 5 kids (50%) by the conventional method is sooner at homeostasis phase. At the inflammation phase the healing time to 6 kids (60%) is slower. While the healing time by electric cauter method at the phase of

homeostasis, inflammation dan proliferasi onto all 10 respondents (100%) is faster.

- 3) There is a difference healing time at circumcision injuries by conventional and electric cauter methods with p value $0,046 < \alpha 0,05$ in Genteng-Banyuwangi in 2015.

b. Suggestion

- 1) To the Research Institution

It is suggested to parents to apply electric cauter circumcision as at this method the process runs faster, minimum bleeding, and the sooner healing time.

- 2) To the Health Care Practitioners

To educate a health to the kids that are about to circumcised and also to the parents about the advantages of having electric cauter circumcision.

- 3) To the Researcher

To do further research relater to other factors slowing down the healing time, such as nutrients that affects to the healing of injury.

- 4) To People

Suggesting people to have electric cauter method circumcision rather than the conventional one, also educate foods containing great nutrient, giving a good and right care to the circumcision injury.

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