



Wound healing procedure for Electric Cauter and Smart Klamp circumscisions

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ABSTRACT

Khitan, often known as circumcision, is the act of cutting or removing all or a portion of the skin covering the front of the penis. This is a commonly performed minor surgical surgery, especially among men worldwide. Circumcision is performed medically to preserve genital health and prevent sexually transmitted illnesses. This study is an observational analysis aimed at determining the wound healing in electric cauter and smart clamp circumcision at the Super Sehat Clinic in Medan. This study's population and sample consisted of all patients registered at the Medan Super Sehat Clinic who underwent circumcision. The sample was determined by randomly selecting 60 individuals. The results demonstrated that the typical wound healing process with cauter electric circumcision occurred on days I, III, and VII. Where on the third day of circumcision with a smart clamp, regeneration is 90% and on the third day of circumcision with an electric cauter, regeneration is 80%, but on day seven, regeneration is 100%. To expedite the wound healing process, it is recommended that health providers perform circumcision using an electric chauter and smart clamp.

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ABSTRAK

Khitan atau sirkumsisi adalah tindakan memotong atau menghilangkan sebagian atau seluruh kulit penutup depan dari penis. Tindakan ini merupakan prosedur bedah minor yang paling sering dilakukan diseluruh dunia terutama pada laki-laki. Secara medis sirkumsisi dilakukan untuk menjaga kesehatan seksual dan mencegah penyakit menular seksual. Penelitian ini bersifat observasi analitik yang bertujuan untuk mengetahui bagaimana kesembuhan luka pada khitan electric cauter dan khitan smart klamp di Klinik Super Sehat Medan. Populasi dan sampel dalam penelitian ini adalah semua pasien yang melaksanakan khitan dan terdaftar di Klinik Super Sehat Medan sampel ditetapkan dengan cara Total Sampling sejumlah 60 orang. Hasil penelitian menunjukkan bahwa proses penyembuhan luka dengan khitan elektrik cauter dari hari ke-I, III dan VII mengalami regenerasi. Dimana hari III ke Khitan dengan smart klamp regenerasi nya 90% dan Khitan dengan elektrik cauter regenerasi nya 80%, sedangkan pada hari VII sama sama regenerasinya 100%. Dengan demikian perlu disarankan agar diharapkan pelayanan kesehatan perlu menerapkan khitan dengan elektrik chauter dan smart klamp untuk mempercepat proses penyembuhan luka

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INTRODUCTION

Male circumcision has historically been associated with religious practice and ethnic identity. Circumcision was practiced among ancient people, including the Egyptians and Jews, with recorded data describing that the practice originated from royal tombs from Egypt and wall paintings in 2300 BC BC (World Health Organization, 2007). Three main reasons. First, for ritual or religious significance (for example, Jews perform circumcision on children after 8 days of life, while in Muslims between 4 and 13 years of age). Second, for prophylactic purposes, namely ensuring hygiene. Third, as a therapeutic indication for various related diseases such as phimosis (Ganeswari et al., 2020). The first time, a report on the status of circumcision as a potential risk factor for sexually transmitted infections was published in 1855 by Hutchinson (Ganeswari et al., 2020).

The World Health Organization (WHO) reported in 2007 that 30% of men aged 15 and older have undergone circumcision, of which 69% are Muslims, 0.8% are Jews, and 13% are non-Muslims and Jews circumcised for "health" reasons. Indonesia is an eastern nation where the majority of the population is Muslim and circumcision is typically performed between the ages of 5 and 12 years. In Indonesia, 85 percent of all males have been circumcised (8.7 million). 25% (2.5 million) of this number are non-Muslims (World Health Organization, 2007).

Circumcision causes negative effects, with 20 to 30 percent of circumcised youngsters developing difficulties such as profuse bleeding or infection at the suture site. As many as 10 out of 1,000 boys had to undergo recircumcision because too much skin remained. (Arifrianto, 2012). The dangers associated with male circumcision are normally minor, but they can be severe if the procedure is performed in an unsanitary environment, by incompetent personnel, or with inadequate equipment. In addition, other circumcision implementation techniques have been devised to make the procedure safer, simpler, quicker, and less painful. (Harsono, 2011).

Arifin et al., (2015) During 2013, 134 children were circumcised at the sub-district health facility in Gambangan village, Maesan sub-district, according to a report. The prevalence of circumcision varies based on region, religion, and socioeconomic status. In one study, circumcision rates were as follows: 81% in whites, 65% in African-Americans, and 54% in Hispanics..

According to a report from WHO's Neonatal Hospital Discharge in 2007, circumcision was performed on 1.2 million (65.3%) infants. Currently, 70% of obstetricians, 60% of family physicians, and 30% of pediatricians practice circumcision. This circumcision has numerous advantages, including a decreased incidence of sexually transmitted diseases, penile cancer, and urinary tract infections. In an observational research, it was discovered that uncircumcised men had a greater chance of acquiring urinary tract infections.

According to Theoret CL and Sibbald RG in (Kartika et al., 2015) Current wound care techniques based on the notion of moisture balance are more successful than conventional approaches. The treatment of wounds based on the principle of moisture balance is known as the contemporary dressing method. Moisture balance enables the activity of growth factors, cytokines, and chemokines that drive cell development and stabilize the wound tissue matrix in acute wounds. The wound must therefore be maintained moist. A too-humid environment can result in maceration of the wound edges, whereas less humid conditions result in cell

death and prevent the transfer of epithelial and matrix tissue.

Modern wound care still involves three steps: cleaning the area, removing any dead tissue, and selecting a dressing. The purpose of washing the wound is to lower the amount of germs and to remove the remains of the previous dressing, necrotic tissue, or dead tissue and cells from the wound surface. Modern wound care is based on the notion of keeping the wound moist using materials such as hydrogel, while traditional wound care involves regular gauze dressing replacements. Hydrogel acts to maintain a moist wound environment, soften and eliminate necrotic tissue without harming good tissue, which is subsequently absorbed by the gel structure and removed with the dressing (natural autolytic debridement). The dressing may be applied for three to five days without causing damage or discomfort during dressing changes. Sibbald RG in (Kartika et al., 2015) Ca Alginate, another form of contemporary dressing, includes Ca, which may aid stop bleeding. Hydrocellulose has the ability to absorb twice as much liquid as Ca Alginate. Next is hydrocolloid, which may guard against water and bacterial contamination and is suitable for both primary and secondary dressings. The use of contemporary dressings is tailored to the kind of wound..

Sibbald RG and Fernandez R contend in that wounds with excessive exudate need a dressing material that absorbs fluids, such as foam, but wounds that have begun to form granulation are treated with gel to produce a moist environment that accelerates wound healing.

From the first medical record survey at the Super Sehat clinic, it was determined that the average number of circumcision patients each month in 2018 was thirty, and that the post-circumcision wound healing period was quicker with smart clamp circumcision than with electric cautery circumcision.

Based on the description on the background, the authors are interested in examining how the description of wound care in electric cauter circumcision with smart clamp circumcision on the wound healing process at the Super Sehat Clinic Medan

RESEARCH METHODS

Research Type and Design

This sort of research is analytical observation research with a cross-sectional design, specifically a study to examine a dynamic link between risk variables and outcomes, and an approach, observation, or data collecting at a certain period (point time approach). This research seeks to assess the impact of electric cautery and clamp circumcision wound treatment at the Super Sehat Clinic Medan on the wound healing process.

Population and Sample

The population is the entire source of data needed in a study (Notoadmodjo, 2018). In 2019, a total of 150 circumcision patients who were enrolled at the Medan Super Sehat Clinic were included in this study's case population. The sample is a subset of the population chosen in a manner that makes it representative of the whole population (Sugiyono, 2016). With the slovin formula, the number of respondents taken was 60 patients, and the study was divided into two groups: group A included as many as 30

patients who were research subjects for circumcision patients with cautery, and group B included as many as 30 circumcised patients using the smart clamp method.

Types and Methods of Data Collection

This research is a type of primary data, namely data that is directly obtained by researchers by looking directly at the

response using a wound observation sheet (beat Johnson wound assessment) at the Super Sehat Clinic in Medan.

Data analysis

Data analysis describes the frequency distribution of the wound care description in electric cauter circumcision and smart clamp circumcision with the wound healing process

RESEARCH RESULT

Table 1 Frequency Distribution of Circumcision Wound Healing Process with Electric Cauter and Smart Klamp Circumcision at Super Sehat Clinic Medan

Wound Healing Process	Elektrik Cauter			Smart Klamp		
	Category	f	%	Category	f	%
Day-I	Regeneration	0	0	Regeneration	0	0
	Degeneration	30	100.0	Degeneration	30	100.0
	Total	30	100.0	Total	30	100.0
Day-III	Regeneration	24	80.0	Regeneration	27	90.0
	Degeneration	6	20.0	Degeneration	3	10.0
	Total	30	100.0	Total	30	100.0
Day-VII	Regeneration	30	100.0	Regeneration	30	100.0
	Degeneration	0	0	Degeneration	0	0
	Total	30	100.0	Total	30	100.0

In Table 1, On the first day of the healing phase of the electric cautery circumcision wound, all responders reported a process of wound deterioration. On the third day, twenty-four participants (80 percent) underwent wound regeneration, whereas six participants (20 percent) suffered wound degeneration. On the seventh day, it was determined that all responders (100%) underwent wound regeneration. On the first day, all responders (100%), who were aware of the smart clamp wound healing process, saw a process of wound degradation. On the third day, ninety percent of responders reported wound regeneration, whereas ten percent suffered wound degeneration. On the seventh day, it was determined that all responders (100%) underwent wound regeneration.

DISCUSSION

Overview of Smart Klamp Circumcision and Electric Cauter Circumcision on Wound Healing at the Medan Super Health Clinic in 2019 According to table 1, the wound healing process using cautery electric circumcision on days 1, 3, and 7 exhibited regeneration. Where on the third day after circumcision with a smart clamp, regeneration is 90%, and on the third day of circumcision with an electric cauter, regeneration is 80%, the seventh day regeneration is 100%. Based on the aforementioned findings, it was determined that electric cautery and smart clamps were equally efficient in expediting the healing of circumcision wounds.

Circumcision is a the process of removing the foreskin of the penis so that the glans penis becomes exposed (Arifin et al., 2015). According to Efendi (2010), electric cautery Circumcision is a wound therapy performed using hetting procedures to minimize the wound's surface area, which has a significant impact on the wound healing process. Circumcision is a small surgical operation in which an incision is made in the prepurtium to modify a portion of the body (Wahyuningrum, 2020).

According to (Wahyuningrum, 2020) circumcision with the clamp method averages the 10th day of healing and the 15th day at the longest post-circumcision this is because in the clamp method there are clamps as foreign objects that clamp the skin so that it prolongs the healing process of post-incision tissue while the glue method only special glue for circumcision is applied to glue the post-circumcision tissue tear which does not affect the process of uniting the wound due to the incision.

Using 0.9% NaCl and gentamicin ointment, the wound care for the two circumcisions tries to clean the wound and promote a more hospitable environment surrounding the wound. It is anticipated that NaCl 0.9% and gentamicin ointment will promote granulation, proliferation, and maturation while reducing the risk of infection. This investigation revealed that the use of 0.9% NaCl and gentamicin ointment was still extremely successful, as indicated by the wound healing process and the absence of infection.

CONCLUSION

The healing process of the electric cautery circumcision wound from days I, III and VII underwent regeneration. Where the third day of regeneration is 80%, and the seventh day is the same as 100% regeneration. The smart clamp circumcision wound healing process from the I, III and VII days underwent regeneration. Where the third day of regeneration is 90%, and the seventh day is the same as 100% regeneration.

SUGGESTION

- a. For Health Services in particular
 Health workers need to implement circumcision with electric chauters and smart klamb to speed up the wound healing process.

- b. For Other Researchers
Further research on wound care techniques.

World Health Organization. (2007). *The world health report 2007: a safer future: global public health security in the 21st century*.

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Statement of Conflict of Interest

The publication of this journal is done in order to add to the discourse for other researchers and also increase the author's achievements in terms of the burden of lecturer performance. This research was carried out after the authors saw the act of circumcision or circumcision using an electric cauter and smart clamp circumcision, so the authors wanted to know how the wound healing process. These results are useful for health services that to speed up the wound healing process can apply circumcision with electric chauters and smart clamps. This research has no conflict of interest

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