

The Effect of Giving Gabus Fish on the Healing Process of Postoperative Sectio Caesarean

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Abstract: This study is based on the high incidence of postoperative sectio caesarean wound infections ranging from 30-50%. According to the local community, Gabus fish has the efficacy of speeding up the process of healing post-operative caesarean wounds. The study aims to determine the effect of Gabus fish on the healing process of sectio caesarean. This research used quasi experiment method, which were an intervention group and a control group and a sample of 34 mothers. Data were analyzed by using the Fisher's Exact Test with the Spearman's correlation test, the results obtained by the majority of the intervention group experienced rapid wound healing by 14 people (82.4%) and the control group experienced slow wound healing by 13 people (76.5%). Statistical test results show that $p \text{ value} = 0.002 < \alpha = 0.05$, then H_0 is rejected, which is the effect of Gabus fish on the healing process of postoperative caesarean wounds. In conclusion, Gabus fish consumption can accelerate healing postoperative wounds of caesarean section around 82.4%.

1 INTRODUCTION

Sectio caesaria is a surgery to give birth to children through an incision in the abdominal wall and uterus (Oxorn & Forte, 2018). According to the World Health Organization (WHO) for 2010, the average standard for performing *sectio caesarea* in a country is around 5-15% per 1000 births in the world. The labor increase with *sectio caesarea* in all countries during 2008 - 2010 was 110.000 per birth in all of Asia (Kounteya, 2012). According to the Basic Health Research (2013), there were 45937 deliveries in North Sumatra as many as 9253 *sectio Caesarea* (20.1%) with infection rates of post-sectio caesarean scar after birth ranged from 30-50%. From the above data, it shows that the incidence of section caesarean infection in North Sumatra is quite high.

The use of Gabus fish extract is based on the nutritional content of fish which is rich in albumin. Albumin is a protein content with the most volume or amount in the blood. In the process of healing or wound recovery, albumin is very important because it is in the process cell metabolism, albumin plays a role in the formation of new cell tissue. By Therefore, albumin is suitable for stimulating the

formation of new cells damaged by surgery during surgery. The use of Gabus fish extract has greatly developed in medicine or postoperative care in humans. This has proven effective in accelerating the wound healing process

The wound healing process is much influenced by nutrition, endurance and supplementation. This is supported by the research result which is conducted by Setyowati (2010), it is about the relationship between Gabus fish consumption with post SC suture wound healing at Private Medical Center (PMC) of Mrs. Aida Hasnani Nuhu, AMd. Keb. Beru Village, Dawar Blandong Sub district, Mojokerto Regency, it is used a Post Test only control group design with the value results of $p = 0.006 < \alpha = 0.05$, which means there is a relationship between Gabus fish consumption with post SC suture wound healing at PMC of Ny. Aida Hasnani Nuhu, AMd. Keb. Beru Village, Dawar Blandong Sub District, Mojokerto Regency. Nutrition that is needed for wound healing is to consume foods that are high in protein. Protein is found in food, meat and fish. All types of fish are excellent sources of protein. Gabus fish are known as fish with more nutritional and protein content than other types of

fish such as milkfish (Waryana, 2010, p.76). The advantage of Gabus fish has a high protein, protein content per 100 grams of Gabus fish.

According to the Basic Health Research (2013) Maternal Mortality Rate (MMR) in Indonesia is 250 per 100,000 live births (KH). More than 500,000 Indonesian women die every year. 18,000 deaths occurred during childbirth caused by bleeding, birth canal infections, pregnancy poisoning and other illnesses suffered by the mother. According to the Basic Health Research (2013) delivery rates in North Sumatra province were 45937 deliveries with sectio caesarea delivery at 9253 (20.1%) with infection rates after birth of sectio caesarea ranging between 3-5% (Mappaware, 2014).

A good level of protein consumption is needed for the wound healing process. In the end, with a good consumption pattern and protein consumption level, it is hoped that the wound healing process can run perfectly, and avoid the problem of postnatal infection due to post-caesarean wounds. One of them is by consuming gabus fish (Purwaningsih, 2010).

Research conducted by Fitriyani (2016) with titled "Gabus Fish Extract to Accelerate Post Cesarean Wound Recovery." This research shows that Gabus fish extract significantly influences the speed of wound healing in all objects with inflammatory symptoms and faster wound conditions. According to Ulandari et al (2011) Gabus fish has benefits such as increasing albumin levels and endurance, accelerating the process of healing internal and external wounds. Whereas one of the factors in the process of accelerating wound healing that it requires high protein found in Gabus fish. The phenomenon that develops in the community of North Sumatra Particularly in Deli Serdang Regency today that there are still many myths in the community that affect the health of postpartum mothers, such as it does not allow to consume food such as eggs, meat, shrimp because it will aggravate stitches; though these foods are very important for the wound healing process. Besides that, the majority of Deli Serdang Regency people have Gabus fish pond waters because of affordable and easy to obtain reasons and the call of health workers who advise post partum mothers to use Gabus fish in healing post-operative wounds because the Gabus fish content contains protein and albumin which is very important for health (Ghufran, 2010, p.93). Based on research on amino acids in gabus fish triggers the production of collagen which can increase the strength and elasticity of the skin. Assisted by the presence of glycine, arachidonic acid and fatty acids, gabus fish

has been proven to help accelerate wound healing. By consuming gabus fish regularly and regularly can also provide anti-pain effects. In one study it was said that gabus fish had a content that could increase the antinociceptive effect.

The effect is able to relieve the pain that occurs due to injury.

Not only limited to that, anti-pain medication combined with consumption of gabus fish also provides a more maximum effect. The study said that the administration of gabus fish extract can reduce the intensity of pain felt by patients after surgery.

Based on research that has been done revealed that gabus fish has the highest albumin content compared to sea fish and other freshwater fish like catfish and carp. Albumin is one important types of proteins needed by the human body every day even in the process of healing wounds. Fish gabus has strategic potential as well as its uses widespread in the food and pharmaceutical industries. Albumin is a blood plasma protein which is synthesized in the heart and plays an important role in guarding plasma osmotic pressure, transporting molecules small plasma as well as extra fluid cells as well binding drugs. In addition, albumin can be used to overcome various diseases especially those due to the reduced amount of blood protein, like burns, broken bones, post surgery, and lung infections. Suprayitno (2008a) stated gabus fish albumin have a much better quality than egg albumin commonly used in healing post-surgical patients. Gabus fish itself, contains 6.2% albumin and 0.001741% Zn with essential amino acids namely threonine, valine, methionine, isoleucine, leucine, phenylalanine, lysine, histidine, and arginine. As well as non-essential amino acids including aspartic acid, serine, glutamic acid, glycine, alanine, cysteine, thyroxine, hydroxylisin, ammonia, hydroxyproline, and proline. Related to the content of albumin contained there gabus fish, obtained data that contains fish albumin male gabus by 6.7% lower than fish female gabus that has an albumin level of 8.2%. Albumin which has such a big role, until now it is still imported in the form of Human Serum Albumin (HSA) which is very expensive. For get crude albumin, can be done with steaming or vacuum extractor to obtain better yield and quality. Gabus fish through his albumin as a compiler of HSA can be used as an alternative availability of nutrients in order to improve nutrition Indonesian people without using big costs (Moedjiharto, 2008). The study was conducted in the treatment of patients using gabus fish that is steamed for 60 minutes and filtered the water, then drink it in the patientmpostoperatively for 8 days. The result will be a patient's wound heal faster and without side

effects. This matter due to the high protein content in fish gabus which functions in the formation of new cells in the patient's body postoperatively. High content gabus fish protein can be utilized for overcome malnutrition. Malnutrition is characterized by low levels of albumin, are below normal levels 3,5--5,5 g / dl (Suprayitno, 2008b). The phenomenon that develops in the community at the moment there are still many myths in the community that influence health in puerperal mothers, like no allow consuming food like, eggs, meat, shrimp because it will aggravate stitches. Though kind these foods are very important to wound healing process. other than that the majority of the people of Deli Serdang Regency are many has cork fishpond waters because of affordable and easy to obtain reasons as well the call of health workers who advocate for post partum mothers to use deep cork fish extract wound healing due to cork fish content containing protein and albumin which is very important for health (Ghufran, 2014).

Based on the above background, the formulation of the study problem was "The Effect of Giving Gabus Fish on the Healing Process of Postoperative Sectio Caesarean in 2019".

2 METHOD

This research is a quantitative study with a Quasi Experiment method with the treatment and observation process carried out with a prospective (time series) where the sample is as a control group and then used as an intervention group (Nursalam, 2013). The location of this study was conducted at Sembiring General Hospital. Samples were obtained by researchers as many as 34 people with a purposive sampling technique. Purposive sampling is a non-random sampling technique in which researchers observe the wound healing process starting on the 7th day and the 14th day (second week).

This research was conducted by dividing 2 groups, namely the intervention group (given Cork fish) consisting of 17 people and the control group (without Cork fish) consisting of 17 people. The processing of cork fish starts from cleaning cork fish to cooking it. Cork fish that has been cooked either fried or in soup was given to the intervention group for 5 days of administration. Cork fish is given for 5 days post caesarean section operation with administration @ 100 grams / day. On the 7th and 14th day postoperative wound healing began to be observed using the wound healing assessment observation sheet that researchers used containing 5 wound assessment items. Criteria for assessment of

wounds are assessed by 5 criteria, namely no signs of infection in the wound, no bleeding, formation of blood clots in fibrin, dry sores and abscesses. This is measured by the Measurement Scale which is given a value of 1 if the answer is Yes and given a value of 0 if the answer is No. Then the results of these observations are grouped in the category of wound healing which is categorized as Fast if the respondent's answer is $\geq 75-100\%$ while it is categorized as Slow if the respondent's answer $< 75\%$.

The statistical formula used to analyze the effect of giving Gabus fish on post cesarean wound healing using the Fisher Exact Test with Spearman Correlation Test significance value p value < 0.05 .

RESEARCH PROCEDURE STAGE

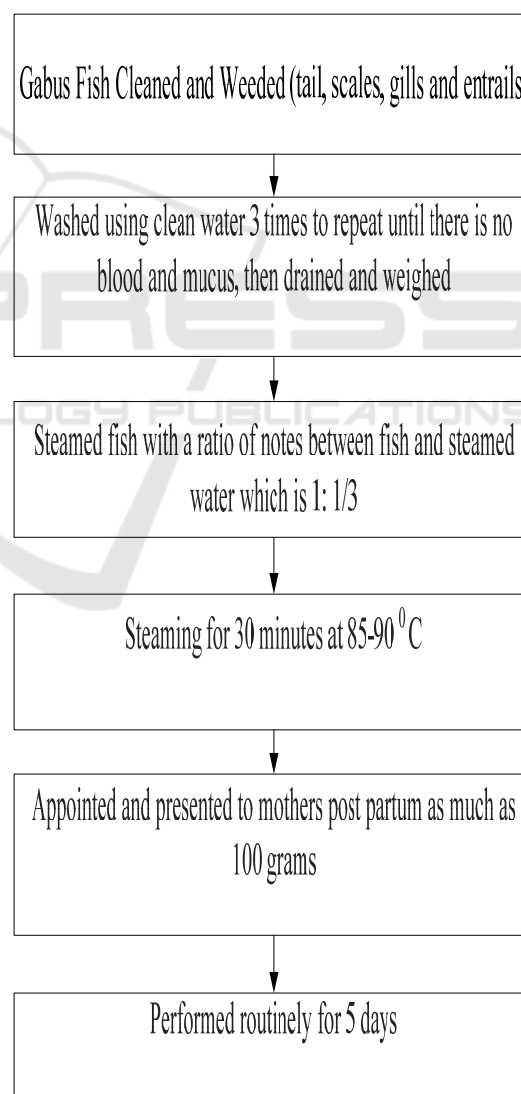


Figure 1: Research Procedure Stage

How to cook gabus fish that is, gabus fish cleaned and weeded (tail, scales, gills, and entrails) then washed using clean water 3 times (Sari, 2014) until there is no blood and mucus, then drained and weighed. Furthermore, steamed fish with a ratio of notes between fish and steamed water is 1: 1/3 (Fatmawati, 2014). According to Sari (2014) steaming for 30 minutes with a temperature of 85-900C can be obtained the highest levels of albumin by 24.25%. The purpose of this cooking is to inactivate enzymes and kill spoilage microbes that are pathogenic and do not form spores (Sari, 2014). A good cooking process can affect the organoleptic value of gabus fish, especially on texture. According to Irawan (1997) in Fatmawati (2014). The purpose of cooking both boiling and steaming is done to maintain the quality of fish meat that is a dense texture.

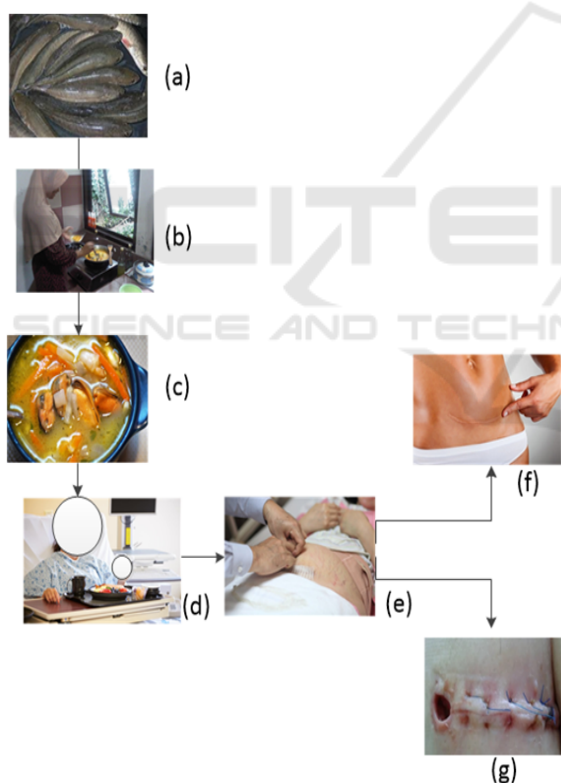


Figure 2: Research Flow (a) Gabus Fish, (b) Cooked, (c) Gabus Fish is ready to be served, (d) Mother eats Gabus Fish, (e) Surgery wound was observed, (f) Dry wound, (g) Wound infection

Criteria for assessment of wounds assessed by 5 criteria, namely no signs of infection in the wound,

no bleeding, formation of blood clots in fibrin, dry sores and non-festering wounds. It is measured by a Measurement Scale that is rated 1 if Answer Yes and given a value of 0 if the Answer No. Category in wound healing is divided by 2 namely Fast: $\geq 75-100\%$ while Slow: $< 75\%$.

3 RESULTS AND DISCUSSION

3.1 Results of Cross Tabulation Effect of Gabus Fish Giving against Healing of Postoperative Caesarean Sectio Wounds

Based on table 1. it is known that the majority of the intervention group respondents with fast wound healing were 14 respondents (82.4%) while the slow wound healing was 3 respondents (17.6%).

Table 1: Frequency Distribution of Intervention Groups of Postoperative Sectio Caesarean Mothers Based on Wound Healing

No.	Recovery The wound	n	%
1	Fast	14	82,4
2	Slow	3	17,6
Total		17	100

Based on table 2. it is known that the majority of the control group respondents with fast wound healing were 4 respondents (23.5%) while the slow wound healing was 13 respondents (76.5%).

Table 2: Frequency Distribution of Control Groups of Postoperative Sectio Caesarean Mothers Based on Wound Healing

No.	Recovery The wound	n	%
1	Fast	4	23,5
2	Slow	13	76,5
Total		17	100

Based on Table 3 the results obtained are respondents who were given Gabus fish (intervention) with Fast wound healing as many as 14 respondents (41.2%) and Slow wound healing as many as 3 respondents (8.8%) while the results of respondents who were not given Gabus fish (control) with rapid wound healing by 4 respondents (11.8%)

and Slow wound healing by 13 respondents (38.2%). After testing with the Fisher's Exact Test with the Spearman Correlation test it can be seen that the significant value of p-value = 0.002 is smaller than the value of $\alpha = 0.05$. So from these results it can be said that there is an effect of giving Gabus fish to the healing process of postoperative caesarean sores. Research which is conducted by Indah Setyowati (2013), in her research on the relationship between consumption of Gabus fish (*Ophiocephalus*) with wound healing of cesarean section stitches at PMC of Ny. Aida Hasnani Nuhu, AMd.Keb Beru Village, Dawar Blandong Sub district, Mojokerto Regency, it is found that half of respondents who were given Gabus fish (intervention group) as many as 17 respondents which is experienced wound healing in postoperative sectio cesarean surgery (≤ 7 days) as many as 12 respondents (70, 6%). In this case, Gabus fish as an alternative therapy for wound healing post sectio caesarean. According to Kelvin (2014), 100 grams of Gabus fish can get 25.2 grams of protein; it is higher than chicken (18.2 grams), beef (18.8 grams) and eggs (12.8 grams), 25.5% higher than the protein content of milkfish and snapper (20%), carp (16%), or sardines (21.1%). Gabus fish is a potential source of albumin and protein which also contains complete amino acids and micronutrients. From various case studies and research it is known that extra Gabus fish can significantly increase albumin levels in albuminemia cases and accelerate the process of wound healing in postoperative cases (Nugroho, 2013).

Table 3: Results of Cross Tabulation Effect of Gabus Fish Giving Against Healing of Postoperative Sectio Caesarean Wounds

No	Gabus Fish	Wound Healing				Total		α	P Value
		Fast		Slow		n	%		
		N	%	n	%				
1	Was given	14	41,2	3	8,8	17	52,9	0,05	0,002
2	Not given	4	11,8	13	38,2	17	47,1		
Total						34	100		

Based on Table 4, it can be seen that the study is conducted on 34 respondents, it was divided into 2 groups: the group that was given Gabus fish (intervention group) was coded I as many as 17 respondents and the group that was not given Gabus fish (control group) was given code K as many as 17 respondents were known that in the intervention group with rapid wound healing as many as 14 respondents (82.4%) with slow wound healing only

3 respondents (17.6%). It is found that the control group with fast wound healing as many as 4 respondents (23.5%) with slow wound healing as many as 13 respondents (76.5%). Because Gabus fish is one type of fish whose main content is protein or albumin which is quite high. While one of the factors in the process of accelerating the healing of stitches in post-sectional caesarean stitches that it requires high protein which is found in Gabus fish. The Gabus fish protein content is also higher than food which has been known as a source of protein such as eggs, chicken meat, and beef. Because of this content, Gabus fish has very high benefits or uses to accelerate the healing of post sectio caesarean wound sutures. This is because the main content of it is the protein or albumin which is quite high. So the administration of Gabus fish to healing postoperative section cesarea is very effective. Giving cork fish to the treatment group was intended for accelerate post SC wound healing. Because cork fish is one types of fish whose main content is its protein or albumin high enough. While one factor the process of accelerating wound healing post SC stitches ie require high protein found in fish cork. The cork fish protein content too higher than food ingredients that are so far known as a source of protein like eggs, chicken meat, or meat cow. Because of this content, cork fish has the benefits or uses very high to speed up post SC wound suture healing. One of the cork fish consumption motivated by the age of the respondent. Age is quite mature cause respondents in the treatment group who get cork fish able realize the importance of consuming cork fish as an alternative treatment which accelerates wound healing the stitches he experienced. This matter also affects his obedience in consume cork fish for research. This is in accordance with research conducted by Prof. DR. Dr. Nurpudji A. Taslim from the University Hasanuddin, Makassar which shows patient albumin levels at Wahidin Hospital Sudiro Husodo Makasar, South Sulawesi, increased sharply after several times consuming cork fish. Research A similar action was also carried out in part General Hospital Dr. Saiful Anwar Poor. The results of the trial indicate albumin of a yang level low (1.8 g / dl) becomes normal. Research conducted at the University Hasanudin also showed giving Cork fish extract for 10-14 days can increase blood albumin levels 0.6-0.8 g / dl. Albumin is a protein the most contained in cork fish plasma, about 60% of the total plasma, or 3.5 to 5.5 g / dl (www.sariikankutuk.com/2007).

Table 4: Observation Results of Post Partum Wound Heal Observation Based on Visit I (4 days), Visit II (7 Days) and Visit III (14 Days)

No.	Code	VISITING															Fr	Percentage	
		I					II					III							
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5			
1	I	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	86,7
2	I	0	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	10	66,7
3	K	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	13	86,7
4	I	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14	93,3
5	I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
6	K	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	9	60,0
7	K	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	10	66,7
8	K	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	10	66,7
9	I	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14	93,3
10	I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
11	K	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	13	86,7
12	K	0	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	11	73,3
13	K	0	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	10	66,7
14	I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
15	I	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14	93,3
16	K	0	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	9	60,0
17	I	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	10	66,7
18	I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
19	K	0	0	0	0	1	0	0	1	0	1	1	1	1	1	1	1	8	53,3
20	K	1	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	11	73,3
21	K	0	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	11	73,3
22	K	0	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	9	60,0
23	I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
24	I	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	12	80,0
25	I	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14	93,3
26	K	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	13	86,7
27	K	1	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	11	73,3
28	I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
29	I	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14	93,3
30	K	0	0	0	0	1	0	0	1	0	1	1	1	1	1	1	1	8	53,3
31	I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
32	I	1	1	0	0	1	1	1	0	0	1	1	1	1	1	1	1	11	73,3
33	K	1	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	11	73,3
34	K	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14	93,3

4 CONCLUSION

The conclusion of this study is that of 34 respondents who were divided into 2 groups namely group 1 was the intervention group and group 2 was the control group. In the control group consisting of 17 respondents it was found that 4 people experienced rapid wound healing and 13 people experienced old wound healing while in the intervention group it was found that from 17 respondents, 14 people experienced rapid wound healing and 3 people experienced slow wound healing. And from the Fisher Exact Test results with the Spearman Correlation test p value = $0.002 < \alpha = 0.05$. So it can be concluded that by consuming cork fish can accelerate wound healing after caesarean section around 82.4%.

5 SUGGESTION

For education : The results of this study for the Deli Husada Deli Tua Health Institute can be used as literature material in the library or data sources, information sources that can be used as scientific documentation for further research that requires input in the form of data or research development with the same topic

For Hospitals and Patients : The results of this study for Sembiring Deli Tua General Hospital can take advantage of the results of this study as a reference for determining policies in terms of improving the quality of nursing services in accelerating the healing of patients with sectio caesarea. Whereas patients are expected to pay more attention to nutritious food intake for the next healing process, especially those that have high protein content, so that it can more quickly repair body cells that have been injured due to incorrect operations one with more regular gabus fish consumption.

For further research, it is expected that the results of this study can be used as inspiration for further research and researchers can also further refine the method used, so that the results are more accurate and can be used as an alternative therapy for post-sectional caesarean patients.

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