



Managing Postoperative Pain: The Role of Guided Imagery Therapy in Supravaginal Hysterectomy Patients with Uterine Myoma

Hani Febriyanti^{1*}, Eka Afdi Septiyono¹, Ani Kisnawati², Dina Ulfia²

¹ Faculty of Nursing, University of Jember, Indonesia

² dr. Soebandi Regional Public Hospital Jember, Indonesia

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ABSTRACT

Myoma uteri are benign tumors that grow both inside and outside the uterus that are not malignant but can cause pain to those who have them. Management of uterine myoma is by surgery. Surgery is closely related to an incision in the skin, which can cause a feeling of pain in the patient. One of the non-pharmacology techniques that can be used to reduce the pain scale is guided imagery. Guided imagery is useful for increasing the relaxing effect, increasing comfort, and relieving the pain that is felt. This work aims to determine the analysis of guided imagery therapy to reduce postoperative pain of SVH (Supravaginal Hysterectomy) laparotomy. Implementation is carried out on patients. The method used in this study was a case study on a client with postoperative SVH laparotomy for indications of myoma uteri. Guided imagery therapy is carried out for 15-20 minutes, with pain assessment carried out before and after guided imagery is carried out. Pain scale measurement using a numeric rating scale (NRS). After being given guided imagery therapy the patient's pain scale which was initially 8 was reduced to 3. Image memory resulting from guided imagery can lead to the perception that the image is happening, which then affects pain receptors and can reduce the intensity of pain felt. Guided imagery relaxation therapy can reduce pain and anxiety and divert attention so that patients feel relaxed and happy.

Keywords: Postoperative Pain, Guided Imagery, Supravaginal Hysterectomy, Uterine Myoma

Corresponding Author:

Hani Febriyanti

Faculty of Nursing, University of Jember,

Jl. Kalimantan No.37, Sumbersari, Jember, East Java 68121, Indonesia

Email: hanifebriyanti15@gmail.com

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1. INTRODUCTION

Women's reproductive health is part of the parameters for assessing the country's ability to provide health services

to the community (Yuliani et al., 2023).

One of the reproductive health problems suffered by women is uterine myoma. Myoma uteri is a benign tumor that

develops from uterine cells and contains a large extracellular matrix, most often found in reproductive age. Uterine myoma has a significant effect on patient morbidity and quality of life (Wulandari et al., 2021).

The incidence of uterine myomas in the United States based on the Armed Forces Health Surveillance Center (AFHSC) is known that there are 11,931 uterine myomas that occur in women of reproductive age with an incidence rate of 57.6% per 1000 each year (Wulandari et al., 2021). Meanwhile, in Indonesia, uterine myoma is a female reproductive disease that ranks second after cervical cancer, with an incidence prevalence of 2.39-11.7% (Retnaningsih and Alim, 2020).

Risk factors that influence the incidence of uterine myoma include age, parity, family history of having uterine myoma, hormonal factors, age at menarche, body mass index (BMI), stress, and hypertension (Dzakwan et al., 2021). Uterine myoma can reduce the patient's quality of life. Based on Arifint et al. (2019), In women with cases of uterine myoma, 35-50% can find clinical manifestations, while the rest do not show any signs or symptoms. Symptoms can also vary between individuals depending on the location, direction of growth, type, size, and number of myomas. The most common

symptom is vaginal bleeding (Daud et al., 2018).

The management of uterine myoma can vary depending on the severity of symptoms and the health condition of the sufferer with uterine myoma (Wianry, 2021). In pharmacological therapy, the drug given has the aim of inhibiting the growth of myomas with hormonal treatment to reduce the production of the hormone estrogen and to reduce symptoms that appear, such as pain and bleeding (Daud et al., 2018). Next is surgery. The types of surgery include hysterectomy and myomectomy (Wianry, 2021). Hysterectomy is a surgical removal of the uterus, while myomectomy is a surgical removal of myoma. The choice of type of surgery is adjusted to the condition and wishes of the patient. Myomectomy is recommended for patients who want fertility-sparing, while hysterectomy is recommended for patients who are over 40 years old and do not plan to have more children.

An overview regarding the condition of patient with a postoperative medical diagnosis of Supravaginal Hysterectomy (SVH) Day 0 for Uterine Myoma and DM Indications. The patient complained of pain in the lower abdomen due to an incision post-surgery, with characteristics of pain that are felt as continuously as

being stabbed in the area of the surgical scar and radiating to the surroundings. The perceived pain scale is 8 (NRS) and worsens when moving.

Pain after surgery is a physiological thing resulting from a wound on the side after a rehabilitation procedure. This pain is included in acute pain and must be treated immediately. If not handled properly, it can cause other complaints, such as difficulty sleeping, anxiety, and loss of appetite (Aswad and Pangalo, 2018). Strategies that can be used in pain management include pharmacological and non-pharmacological approaches (Priyatni et al., 2018). Pharmacological management can be done by administering analgesic drugs according to the doctor's directions. Furthermore, one of the non-pharmacological therapies that can be used to treat pain is to prohibit guided imagery techniques (Fitriyanti and Machmudah, 2020).

Guided imagery is an intervention defined as a relaxation technique that uses individual imagination and carries out guided imagination to achieve a particular effect (Aswad and Pangalo, 2018). If done in-depth and with kites, relaxation of the guided imagery technique can create a feeling of comfort and calm to reduce the patient's pain scale (Safitri and Agustin, 2020).

Based on the results of the study, the patient complained of pain after laparotomy hysterectomy on a scale of 8. Therefore, the authors are interested in conducting guided imagery therapy interventions for pain in post-laparotomy patients.

2. METHODS

This research method uses case studies that focus on a problem by using various information in data collection. Data were taken directly from the condition of the patient's response with complaints of pain due to postoperative SVH laparotomy for indications of uterine myoma in the Dahlia room dr. Soebandi Hospital. This research was conducted in the Dahlia Room Dr. Soebandi Hospital with a frequency of giving therapy once per shift for three days of treatment. On the first day, the researchers conducted a focused assessment of the patient, followed by data analysis, and obtained several nursing diagnoses, namely acute pain, unstable blood glucose levels, impaired physical mobility, and risk of infection (DPP PPNI, 2018). From the diagnoses that appear in patients, researchers are interested in re-evaluating and providing special treatment to nursing diagnoses of acute pain by providing interventions in the form of Guided Imagery relaxation therapy.

Patients are given relaxation therapy according to procedures using media such as cell phones by playing videos that emit melodious and soothing sounds for patients in the hope of reducing the complaints of pain they feel.

3. RESULTS

Based on observations that have been made since the first day, namely January 16, 2023, the patient had a postoperative medical diagnosis of Supravaginal Hysterectomy (SVH) Day 0 for indications of uterine myoma and diabetes mellitus. In 2020, the patient started to experience abnormal bleeding (changing 4-6 pads a day) and noticed a uterine myoma the size of a marble. During the last 3 years, the patient has had menstruation with a large amount of blood. In November 2022, the bleeding increased, and clots came out. Bleeding increases when the patient performs strenuous activities. In the past 1 month, the patient experienced abdominal pain due to an enlarged stomach, weakness, and shortness of breath. On January 12, 2023, when the patient was on control at the ob-gyn polyclinic, the patient

felt much bleeding since morning (1 pad more), and the body felt weak and tight; the patient was immediately taken to the comprehensive emergency obstetric neonatal care, and transferred to the Dahlia Room. While at the Emergency Room, the patient was still experiencing vaginal bleeding. In addition, the patient said left abdominal pain. The examination results obtained HB 9.9 gr/dl and Glucose Ad Random 109 mg/dl.

At the time of assessment, the patient appeared weak, and there was a postoperative wound wrapped in a cascade in the abdominal area with a length of ± 15 cm vertically below the umbilicus. The patient complained of pain in the lower abdomen due to an incision post-surgery, with characteristics of pain that are felt as continuously as being stabbed in the area of the surgical scar and radiating to the surroundings. The perceived pain scale is 8 (NRS 1-10) and worsens when moving. After being given guided imagery relaxation therapy for three days, there was a significant change in the pain scale from a pain scale of 8 to a pain scale of 3 on the third day.

Table 1. Outcome of Acute Pain

Characteristics	Day 1 (16/01/2023)	Day 2 (17/01/2023)	Day 3 (18/01/2023)
Pain complaints	2 (enough increase)	3 (medium)	4 (moderately decreased)
Grimace	2 (enough increase)	2 (enough increase)	4 (moderately decreased)
Protective	2 (enough increase)	3 (medium)	4 (moderately decreased)
Nervous	2 (enough increase)	3 (medium)	4 (moderately decreased)
Diaphoresis	2 (enough increase)	3 (medium)	5 (decreased)

Based on Table 1, the result after implementing nursing from January 16-18, 2023, the analysis of the diagnosis of acute

pain experienced by the patient has been resolved because it has met the outcome criteria.

Table 2. Comparison of the patient's pain scale when given guided imagery therapy

Characteristics	Pain scale (NRS)	
	Before	After
Day 1 (16/01/2023)	8	7
Day 2 (17/01/2023)	7	5
Day 3 (18/01/2023)	5	3

Based on Table 2, the result after being given guided imagery therapy from January 16-18, 2023, was that the patient's pain scale, which was initially 8, was reduced to 3.

4. DISCUSSION

Patient characteristics

In this case, a patient with a medical diagnosis of postoperative SVH laparotomy for indications of uterine myoma. The study data showed that the patient was 40 years old, where the age factor is a risk factor for uterine myoma. This is in line with research conducted by Arifint et al. (2019), which stated that the age characteristics of uterine myoma patients were as many as 40 respondents (48%) aged 36-45 years. The increase in uterine myomas at that age is caused by stimulation of the hormone estrogen, which increases at reproductive age (Meliani et al., 2019). The incidence of uterine myomas is influenced by the stimulation of the hormone estrogen

secreted by the ovaries; in women of reproductive age, increased hormone estrogen levels can increase the risk of exposure (Wulandari et al., 2021).

Assessment data shows that the patient is nullipara or has never given birth. One of the risk factors for the incidence of uterine myoma are the number of parity. In line with research conducted by Arifint et al. (2019) stated that based on parity, there were 33 respondents (39.8%) in the nullipara group, followed by the multipara group, namely 37.3%, then the primipara group, namely 21.7%, and the multigrade group, namely 1.2%. Based on Lubis (2020), women who have never been pregnant before have a greater risk of developing uterine fibroids related to the influence of sex hormones. This is because, after pregnancy, the number of estrogen receptors decreases in the myometrial lining. So, the development of uterine myomas in women who give birth more often is less when compared to

primiparous or nulliparous women (Arifint et al., 2019).

Based on data on the nutritional status of Ny. Y is obese with a BMI value of 35.9 kg/m². One of the risk factors for uterine myoma is obesity. In line with research by Laning et al. (2019) showed that 40 respondents (45.6%) had an obese nutritional status with a BMI > 25. Obesity can trigger a decrease in the synthesis of the hormone sex hormone binding globulin (SHBG), which causes changes in estrogen metabolism and will increase the hormone estrogen. This can increase the prevalence of uterine myomas in obesity (Arifint et al., 2019; Lubis, 2020).

Based on the study data, it was found that patient, in the first month of marriage, used contraceptives in the form of birth control pills. 83 Hormonal contraception is a risk factor for uterine myoma. Based on research by Ridwan et al. (2021), there were 35 respondents (58.8%) patients with uterine fibroids using hormonal contraception. Based on Lubis (2020), the risk of developing uterine myoma will increase when using hormonal contraception. The length of use of contraception also affects the size of uterine myomas; this is related to the length of time the myometrium is exposed to hormones that affect the growth of uterine myomas.

Based on the study data, it was found that patient had comorbid hypertension and diabetes mellitus 3 years ago. Risk factors that can cause uterine fibroids are comorbid diseases such as diabetes mellitus and hypertension (Lubis, 2020; Smeltzer & Bare, 2017). There is an increase in insulin and IGF-I as well as hyperandrogenism, which are trigger factors for PCOS and diabetes, while in hypertension, there is a release of cytokines, which stimulate the proliferation of tumor tissue (Lubis, 2020).

Based on the study data, it was found that patient had experienced irregular menstruation for the last 3 years. In every menstrual period, the amount of blood that comes out is quite a lot, and it takes 4-6 pads daily. Sometimes, blood spots come out outside the menstrual phase. The patient also experienced abdominal pain and an enlarged abdomen. Based on research by Arifint et al. (2019) regarding the symptoms experienced by uterine myoma patients, there were 32 respondents (38.5%) experiencing symptoms of an enlarged abdomen, 25 respondents (30.10%) experienced symptoms of bleeding in the birth canal and 20 respondents (24%) experienced symptoms of abdominal pain.

Vaginal bleeding can cause sufferers to experience a decrease in hemoglobin

levels. The patient has a history of Hb dropping to 4 gr/dl, causing the patient to experience shortness of breath. At the initial admission to the hospital, the patient's HB level was below the standard limit, namely 9.9 gr/dl, and had received two transfusions. After surgery and a transfusion, the patient's hemoglobin level increased to 11.8 gr/dL but was still below typical values. The standard hemoglobin value based on the SPO of the hospital is 12.0 -16.0 gr/dl. Based on research by Arifint et al. (2019), the results obtained were that 20 respondents (24%) had Hb levels of 8-10 gr/dl, and 34 respondents (41%) had Hb levels of 10-12 gr/dl. Abnormal bleeding in myoma sufferers can cause the body to experience iron deficiency, which can cause iron deficiency anemia (Salim & Finurina, 2015).

Based on the study data, the patient underwent laparotomy supravaginal hysterectomy on day 0 for indications of uterine myoma. Supravaginal Hysterectomy (SVH) is an operation to remove the uterus without removing the cervix (Anggraini & Simanjuntak, 2022). Based on research by Arifint et al. (2019), the most management of uterine myomas was a hysterectomy, namely 44 respondents (53.10%). In patients with a hysterectomy, the type of hysterectomy is SVH, where even though the uterus has

been removed, the cervix is still preserved. So that sexual function can still be fulfilled. Based on patient's case, the patient has no plans to get pregnant again and wants to get well soon.

Analysis of Primary Nursing Problems

Based on the assessment, subjective data was obtained that the patient said he felt pain in the abdomen after the operation with the results of the PQRST pain assessment, namely P: pain due to postoperative SVH Laparotomy, Q: pain like being stabbed, R: pain felt in the surgical scar and its surroundings, S: pain on a scale of 8 out of 10 (NRS) T: severe pain when moving. While the objective data obtained were the patient's medical diagnosis as Post Laparotomy SVH- Operation day 0 for indications of uterine myoma, The patient appeared to grimace when moving, the patient appeared to be protective (avoiding painful stimuli), the patient appeared restless, diaphoretic, Found uterine myoma measuring 20x15x15 cm; The patient looked restless and pulse 84 x/minute. Based on these data, acute pain is the primary nursing problem that can be considered in this case.

Acute pain is a sensory and emotional experience caused by actual or functional tissue damage that occurs slowly or suddenly and occurs in less than three

months, with pain levels ranging from mild to severe (PPNI, 2016). In this case, the patient underwent SVH (Supravaginal Hysterectomy) laparotomy on day 0. Based on Fitriyanti and Machmudah (2020), postoperative pain is included in the acute pain category because it has characteristics that match the signs and symptoms, namely having a fast onset or time of onset and a short duration. This can happen because tissue discontinuity is observed when using medical devices in surgical procedures. This network discontinuity causes the body to perceive itself as experiencing pain. Network discontinuities provide stimulation to the body to produce chemical mediators that can cause pain processes in the form of transduction, transmission, modulation, and perception (Fitriyanti & Machmudah, 2020)

Pain experienced by postoperative patients must be appropriately handled. This is because postoperative pain can later cause patients to experience difficulty sleeping and can lead to other complications that can be experienced, one of which is the process of wound healing in postoperative patients being hampered. Painful stimuli can activate large amounts of catecholamines. This results in changes in the work of the cardiovascular system in the form of an increase in blood pressure

and number of pulses. An increase in blood pressure and pulse results in unstable hemodynamics so that oxygen perfusion to the tissues is reduced. Furthermore, the levels of β -endorphins secreted by the pituitary gland will increase and suppress the macrophages' activity, resulting in decreased activity (Anggraini & Simanjuntak, 2022).

Nursing Intervention Analysis

Based on the main nursing problem experienced by the patient, namely acute pain, therefore the author writes a nursing action plan or intervention with the aim that after 3 x 24 hours of nursing care, it is expected that the pain level will decrease with the following criteria: decreased pain complaints experienced by patients decreased facial grimace, decreased protective attitude to avoid pain, decreased anxiety, decreased diaphoresis, and vital signs shown by patients are within the normal range with blood pressure in the range of 110/70 to 120/80 mmHg, pulse is within the number range 60 to 100 breaths/minute, Breathing is in the range of 16 to 24 breaths/minute.

In this case, the intervention plan provided was adapted to the pain management strategy by adding guided imagery complementary therapy to reduce pain. Based on PPNI (2018) in the SIKI

book, the guided imagery technique or guided imagination is defined as a form of imagination that uses all the senses through a cognitive process that works by increasing the effect of relaxation, increasing comfort and relieving pain felt by changing an object, place, event or situation that occurs that is liked by the individual.

The primary purpose of providing guided imagery techniques is to relieve pain and anxiety felt by patients (Nuraeni, 2021). In addition, this technique can also increase the effect of relaxation by communicating involving all human senses (eyes, nose, mouth, ears, and touch), increasing comfort and speeding up the healing process so that it is more effective (Anggraini & Simanjuntak, 2022). Guided imagery indications are all patients or individuals who have negative thoughts that can affect their behavior in everyday life, for example, pain, stress, and anxiety (Sari & Fahrizal, 2023). Guided imagery is declared successful if, after therapy, the patient can increase the positive effect on himself. Meanwhile, contraindications to the implementation of guided imagery are patients who experience anxiety, agitation, and fear (Rismayani, 2019).

Interventions or action plans that can be carried out include conducting a pain assessment before and after guided

imagery, which is carried out with rational information that can be used as basic data regarding the effectiveness of interventions. Furthermore, is there any teaching to patients about guided imagery, according to Soup, which has a rationale that can be used as an alternative option to divert the pain they feel? Collaborating with doctors in administering analgesic drugs that have a rationale for immediately reducing pain intensity from moderate to severe. The following intervention is to monitor vital signs with a rationale for the intensity of pain individuals feel, which can affect the value of TTV. Next, a semi-Fowler's position, which has a rationale that can increase the patient's comfort, is provided.

Nursing Implementation Analysis

The guided imagery therapy is implemented daily from 16-18 January 2023. Before it is carried out, it is necessary to ensure that the environment around the patient is comfortable, calm, and free from other environmental disturbances; first, to build a relationship of mutual trust, explanation of procedures, goals, position, time, and the role of the nurse as a patient-therapist. Advise the patient or client to choose a comfortable position, be near the client, maintain conditions so that the patient feels comfortable, and do good

therapy with the client or patient so that this therapy can reduce pain in the client.

After preparation is complete, continue measuring vital signs and measuring pain scales. Pain assessment was carried out before and after the image-guided action. The pain scale measurement used is the numeric rating scale (NRS). Next, instruct the patient to listen to relaxation music and follow the instructions. The patient is asked to close his eyes followed by taking slow, deep breaths and smiling, encouraging the subject to imagine pleasant things, then asking the client to speak with positive motivation and asking the subject to explain what circumstances might occur. Furthermore. Take a few deep breaths while returning to the present condition to end the guided imagery technique. After completion, an evaluation of pain scale measurements and measurements of vital signs was carried out. Guided imagery therapy is carried out for 15-20 minutes and is carried out after 4-7 hours of administration of analgesics. After being given guided imagery therapy, the patient was asked to rest for 5 minutes and then measured the pain scale. This therapy is given once a day while still paying attention to the patient's condition

Analysis of Nursing Implementation

In the evaluation of the diagnosis of acute pain with the intervention of guided imagery therapy, it was found that there was an effect on reducing the patient's pain scale. After being given guided imagery therapy from 16-18 January 2022, the patient's pain scale, which was initially 8, was reduced to 3. This can happen because the image memory generated from guided imagery will then lead to the perception that the image is happening, affecting pain receptors, which can reduce the intensity of pain felt. This is in line with Aswad and Pangalo's research (2018) concerning the effect of giving guided imagery therapy on reducing pain in post-laparotomy patients; the results showed that there was a change in the pain scale felt in patients before and after administration of therapy, where before receiving guided imagery therapy the average patient pain scale was 5.17 while after being given therapy the average pain scale decreased to 3.1.

Guided imagery therapy provides many benefits to patients. In addition to reducing pain, patients experience other benefits, including increasing comfort, stabilizing the patient's hemodynamics, and sleeping more soundly. Based on the results of the nursing evaluation on patient, it is known that after being given guided imagery therapy, the patient feels more relaxed, where feelings of anxiety about the

conditions experienced have decreased, the body becomes more relaxed, sleep becomes more restful and the condition of frequently waking up at night is reduced. Based on Hidayat et al. (2022), guided imagery therapy is effective in reducing excessive anxiety and pain intensity caused by an increase in internal hormones such as cortisol hormones and endorphins to create feelings of relaxation and happiness in patients.

Based on the results of the nursing evaluation after hemodynamic therapy, the patient became more stable. Blood pressure and pulse measurements were taken before and after this therapy. The evaluation results from the first to the third day showed that after the therapy, the patient's blood pressure and pulse became more stable. In line with research by Aji et al. (2022) stated that after being given guided imagery therapy, the average decrease in systolic blood pressure was 14.5 mmHg and a decrease in diastolic by 5.5 mmHg. The decrease in blood pressure and pulse occurs because the relaxing effect of guided imagery therapy influences it. Relaxation works by inhibiting the stress response of the sympathetic nerves to make the smooth muscles of blood vessels relax and decrease blood pressure and pulse frequency. In addition, when the body is relaxed, the body will produce endorphins. This

hormone lowers neurotransmitters in the form of catecholamines, resulting in a decrease in blood pressure and pulse (Setyani et al., 2022)

Guided imagery therapy is given 1 time a day if the pain is felt to be disturbing, but must still pay attention to the patient's condition. Based on Laily et al. (2022), guided imagery therapy can be done once in three days. Aji et al. (2022) state that to get maximum results, this therapy can be done every day for 15 minutes for 14 consecutive days. This therapy can be carried out by anyone who has negative or distorted thoughts that can interfere with daily life, such as stress, anxiety, and pain (Rismayani, 2019).

Contraindications for this therapy are people who have unstable emotions, have limited intelligence, and someone who cannot accept reality (Rismayani, 2019). The other conditions that must be considered in providing therapy are that the patient does not experience interference in communicating and does not have hearing loss. Guided imagery, in its application, requires individual cognitive abilities to process and focus on the instructions given by the guide (Nuwa & Kiik, 2020).

Administration of guided imagery therapy is carried out after 4-7 hours of administration of analgesics. This was

chosen because the half-life of the analgesic is 4-6 hours (Astrid, 2019). Patients are given analgesics to reduce the pain they feel after the surgical process. However, often, there are still many patients who complain of feeling pain even though they have received analgesic therapy (Mayenti & Sari, 2020). The combination of pharmacological therapy in the form of analgesics and non-pharmacological therapy in the form of guided imagery is the most effective way to relieve pain, especially pain. Both of these therapies can be a single unit in the provision of nursing care. These two complement each other, so if done simultaneously and continuously, it will give much better results. In addition, guided imagery techniques can be carried out independently by the patient's nurse so that if pain recurs at any time, it can be applied immediately. Non-pharmacological techniques are also relatively cheap and free and tend to be efficient.

5. CONCLUSION

After carrying out nursing care based on evidence-based nursing with guided imagery therapy on patient with acute pain nursing problems in the Dahlia Room Dr. Soebandi Hospital from Monday, 16 January 2023 to Wednesday, 18 January 2023, it was concluded that there was an

effect of guided imagery therapy on the pain experienced by clients. These results are also supported and strengthened by previous studies, which stated that guided imagery therapy reduced postoperative pain symptoms.

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AUTHOR CONTRIBUTIONS

Substantial contribution to conception, data collection: Hani Febriyanti. Analysis, writing manuscript and revision: Eka Afdi Septiyono, Hani Febriyanti, Eni Kisnawati, and Dina Ulfia.

CONFLICT OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

DATA AVAILABILITY STATEMENT

The data are not publicly available due to privacy or ethical restrictions.

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