

Original Articles: Case Study

**ANALYSIS OF NURSING CARE FOR THE ELDERLY USING THE
IMPLEMENTATION OF VIRGIN COCONUT OIL (VCO) TO OVERCOME SKIN
INTEGRITY DISORDER IN DERMATITIS AT THE JAMBANGAN WREDA
NURSING HOME, SURABAYA**

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Abstract

Introduction: Dermatitis can disrupt skin integrity, with sufferers feeling itchy, damage to the skin layer, and decreased skin elasticity causing the skin to become dry and scaly.

Objective: This study aims to provide nursing care by administering virgin coconut oil (VCO) to elderly people suffering from dermatitis to overcome skin integrity disorders at the Surabaya Nursing Home.

Methods: The research method used is a case study. The subject of this research is Mrs. T is 77 years old with problems with skin integrity disorders and was given virgin coconut oil (VCO). The assessment was conducted through interviews and direct observation of the patient using a gerontic nursing care sheet and applying VCO according to the SOP.

Results: The results obtained in this study were, after 5 days of intervention, giving virgin coconut oil (VCO) 2x a day, the results were obtained with reduced itching, and elasticity from scale 2 (quite decreased) to scale 5 (increased) as evidenced by visible skin. Quite moist which was initially dry and scaly, tissue damage from scale 2 (quite increased) to scale 5 (decreased) it was proven that inflammation around the skin area decreased which initially had a red rash, damage to the skin layer from scale 2 (quite increased) to scale 5 (decreased) results showed that the reddish rash on the skin decreased, the blackened wound spots decreased.

Conclusions: The use of virgin coconut oil reduces itching, increases skin elasticity, reduces tissue damage, and reduces damage to the skin layer.

INTRODUCTION

Elderly is the closing period in the span of a person's life, namely a period when someone has moved far from their previous period (Priambodo, 2020). The aging process is a natural process accompanied by a decline in physical, psychological, and social conditions that interact. The elderly will experience a decline or changes related to biology, psychology, society, and spirituality (Priambodo, 2020).

In the elderly, aging occurs in every organ, including the skin. In older people, the skin experiences various changes which can cause a decrease in skin hydration levels. This decrease is a decrease in sebum production, vascular function, and corneum function which can dry the skin and cause complaints of itching (Tarumanagara, 2017).

The results of observations at Griya Wreda Surabaya revealed that 163 elderly people were found, while 55 people complained of itching and rashes.

The Central Statistics Agency (BPS) notes that the elderly population has increased by more than 10% since 2020. It is estimated that the percentage of the elderly population will be 10.7% in 2020. This percentage is projected to increase to 12.5% in the next five years. The number of elderly may increase to 14.6% in 2030.

According to Clark et al (2015), the prevalence of skin integrity is 1% to 3% in the general population and 34% to 83% in people with immune deficiencies. Meanwhile, the prevalence of men (3.0%) is more frequently affected than women (2.6%) in all age groups, this suggests that dermatitis may be related to sex hormones such as androgens. The incidence of dermatitis reaches its peak in three age periods, namely the first three months of infancy, during puberty, and adulthood with a peak age of 40 to 60 years (Sandi Husada Health Sciences et al., 2020)

According to 2020 basic health research (RISKESDAS 2020), the prevalence of dermatitis in Indonesia is quite high, reaching 67.8%. In East Java, the prevalence of dermatitis reaches 64.6%. The prevalence of all forms of eczema is 4.66% including atopic dermatitis 0.69% nummular eczema 0.17% seborrheic dermatitis 2.32% which affects 2% to 5% of the elderly.

According to research from Lili (2019), the number of elderly patients in the skin and genital health outpatient unit at RSUD Dr. Soetomo Surabaya for the 2019 - 2020 period there were 299 patients, with the age group 66 - 74 years (58.86%) and domicile in Surabaya (82.27%). The clinical picture of elderly patients mostly complains of itching (60.87%) with the most common diagnosis being dry skin (29.79%), followed by dermatitis or skin inflammation.

In the elderly, due to a decrease in skin hydration, dermatitis is more common than in the young. Because the symptoms are disturbing, dermatitis in the elderly can reduce the person's quality of life.

Decreased hydration levels are caused by decreased sebum production, decreased sweat production, slowed keratinization process, and poor vascularization. One of the clinical impacts resulting from changes and decreased function in the skin of the elderly is skin dryness or xerosis (Sholeha et al., 2021).

Some literature states that human skin degenerates with age. So the skin loses the layer of fat on it and becomes drier. This skin dryness makes it easier for chemicals to infect the skin so that the skin is easily affected by dermatitis (Suryani, 2011).

Current dermatitis treatments have developed rapidly. One of them is treatment using innovative virgin coconut oil (VCO), with regular and correct use, it can speed up the healing of dermatitis

treatment. Virgin coconut oil (VCO) is thought to be effective because the skin easily absorbs this oil and contains substances to accelerate tissue regeneration. Apart from that, virgin coconut oil (VCO) contains lauric and oleic acids which soften the skin, besides virgin coconut oil (VCO) is effective and safe to use as a moisturizer to increase skin hydration, besides that, virgin coconut oil (VCO) is also believed to be good for healthy skin because it contains vitamin E (Zuniarti, 2019). The problem of dermatitis is a problem of skin integrity, so it requires treatment using virgin coconut oil (VCO) is required to avoid complications.

METHODS

Study Design

This research uses a case method with a case method approach. This case study is to explore the application of administering virgin coconut oil (VCO) to reduce skin integrity in elderly people affected by dermatitis.

Settings

The location of this nursing care analysis was carried out at Jambangan Nursing Home, Surabaya. The duration of analysis of nursing care for clients is five days, from 28 April – 02 May 2023.

Research subject

This nursing care analysis was carried out elderly with nursing problems of impaired skin integrity.

Instruments

The application of virgin coconut oil (VCO) is done twice a day after showering in the morning and evenly over the area with a reddish rash in the afternoon. After that, the author documented the client's response after being given virgin coconut oil (VCO). Data collection tools for clients use nursing care sheets using observation and interviews.

Data collection

The author approaches the client by introducing himself and explaining the goals and objectives to him. The author asks for time to carry out the study. Obtain approval from the client, and the client is willing to take part in further research, namely signing informed consent to become a respondent. The author conducted interviews and direct observations of clients. After collecting the data, the author determined problem priorities according to the Indonesian nursing diagnosis standards (SDKI). After that, the author created an intervention that refers to EBN (Evidence Based in Nursing) and is by Indonesian Nursing Intervention Standards (SIKI).

Data Analysis

Data analysis in research used qualitative methods, namely by conducting in-depth interviews, observing patients, and documenting patient medical records.

Ethical Consideration

This research has obtained permission from the University of Nahdlatul Ulama Surabaya and the management of Jambangan Surabaya Nursing Home.

RESULTS

Nursing Assessment

Data was obtained from interviews and observations conducted on April 27, 2023. Data was obtained from interviews and observations. It was found that Mrs. T is 77 years old, female, Muslim, and has lived for about two years and three months at UPTD Griya Wreda Jambangan Surabaya. Mrs. T said he felt itchy in the back area and there was redness in the back area, Mrs. T also said that he often scratches areas that feel itchy until he feels pain due to the scratching. The client said he had never experienced a serious illness before, the client only said he had felt dizzy, a history of serious illness usually, the client said that for the last 3 months, he had only had dizziness and itching. The client's relationship with his roommate recognizes each other,

On physical examination, Mrs. T's general condition is good, Composmentis consciousness with GCS value, E: 4, V: 5, M: 6, the results of the examination revealed that vital signs were obtained Blood pressure: 140/90, Pulse: 97 x/minute, Temperature: 36.5° C, Respiration: 20 x/minute.

On examination of the patient's body system which includes B1-B6, it is explained that:

- a. B1 Breathing: no complaints. Thorax inspection, chest shape is symmetrical, right and left are normal, and no lumps or lesions. Palpation, no tenderness. Percussion, Sonor lung sounds (normal). Auscultation, vesicular breathing rhythm, so there are no abnormalities
- b. B2 Blood: no complaints, normal CRT inspection < two seconds. Percussion sounds dull, and auscultation heart sounds normal.
- c. B3 Brain: no complaints. Normal head shape, no lesions, no lumps, clean and gray hair. The eyes are normal, the conjunctiva is pink, the sclera is white, the pupil is isochronous, the light reflex is present, and there are eye bags. There is no enlargement of the thyroid gland, no enlargement of the jugular veins
- d. B4 Bladder: no complaints Mrs. T uses diapers (diapers), with a frequency of changing diapers twice daily in the morning and evening, with a distinctive smell of urine.
- e. B5 Bowel: no complaints, abdominal inspection no lumps, but there is a slight reddish rash in the area, no tenderness, percussion, tympanic sound, auscultation: bowel sounds eight x/minute
- f. B6 Bone: upper extremities good, no complaints, decreased skin turgor, skin looks wrinkled, no abnormalities, there is a rash on the back, CRT < two seconds, lower extremities cannot be moved perfectly, joint strength is limited and movement is limited, none edema.

Data Analysis

Subjective data Mrs. T said he felt itchy in the back area and redness in the back area, Mrs. T also said that he often scratches areas that feel itchy until he feels pain due to the scratching. Meanwhile, the objective data shows a reddish rash on the stomach, a reddish and blackened back, reddish and rough and Mrs. T appears to be grimacing due to the pain caused by BP: 140/90, N: 97 x/minute, Temperature: 36.5° C, RR: 20 x/minute.

Nursing Diagnosis

From the above analysis, the diagnosis is obtained, namely: Skin integrity disorders related to the aging process are characterized by Mrs. T saying he felt itchy in the back area and that there was redness in the back area, Mrs. T also said that he often scratches areas that feel itchy until he feels pain due to the scratching.

There was a reddish rash on the stomach, the back looked reddish and black, reddish and rough and Mrs. T appeared to be grimacing due to the pain caused by BP: 140/90, N: 97 x/minute, Temperature: 36.5 oC, RR: 20 x/minute minute.

Nursing Intervention

The nursing intervention used in the main diagnosis is effective coughing exercises according to the Indonesian Nursing Intervention Standards (SIKI) book which includes; Identifying the causes of impaired skin integrity (e.g. changes in circulation, changes in nutritional status, decreased humidity, extreme environmental temperatures, decreased mobility), massage the lump area. Use products made from petroleum or oil on the skin. Use products made from mild/natural ingredients and hypoallergenic on sensitive skin. Suggest using a moisturizer (e.g. lotion).

The results criteria are sourced from the Indonesian Nursing Outcome Standards (SLKI) book with the objectives and criteria for elasticity results from scale 2 (sufficiently decreased) to scale 4 (sufficiently increased) Tissue damage from scale 2 (sufficiently increased) to scale 5 (decreased). Damage to the skin layer from scale 2 (moderately increased) to scale 5 (decreased).

Nursing Implementation

Nursing implementation was carried out for 5 days, namely April 28 – May 2, 2023. The administration of virgin coconut oil (VCO) was carried out by the Indonesian Intervention Standards (SIKI), it is known that the application of virgin coconut oil (VCO) can overcome skin integrity disorders, before application of giving virgin coconut oil (VCO) to clients, researchers will provide information to clients about non-pharmacological therapy giving virgin coconut oil (VCO), starting with preparing the environment such as creating a comfortable and safe environment for the client as well as a time contract with the client. Providing virgin coconut oil (VCO) to clients according to Standard Operating Procedures (SOP).

The first meeting was on April 28 2023 at 08.00, to be exact, the client after taking a shower in the morning, the author asked about the client's condition at this time, the client said he was still itching in the back area, then built a relationship of mutual trust, then conveyed the aims and objectives of the action of giving virgin coconut oil (VCO).), then wash your hands and use a handscoon, position the patient comfortably, then clean the area on the client's back that feels itchy, then clean it using a towel, and apply virgin coconut oil (VCO) evenly to the itchy area. The rash appears slowly and gently, then dress the client and position the client comfortably again, tidy up the equipment, and record the client's response after administering virgin coconut oil (VCO).

The activity of applying virgin coconut oil (VCO) is carried out for 3 consecutive days with a frequency of administration twice a day to reduce skin integrity disorders.

Nursing Evaluation

On April 28, 2023, the client said he felt itchy in the back area and redness in the back area. He also said he often scratched the area that felt itchy until he felt pain due to the scratching. There was a reddish rash on the stomach, the back looked reddish and black, reddish and rough and Mrs. T appeared to be grimacing due to the pain caused by BP: 140/90, N: 97 x/minute, Temperature: 36.5°C, RR: 20 x/minute. However, after being given virgin coconut oil (VCO), the client's complaints decreased slightly, itching, and elasticity from scale 2 (moderately decreased) to scale 3 (moderate), tissue damage from scale 2 (quite increased) to scale 3 (moderately decreased)), skin layer damage from scale 2 (moderately increased) to skin level 3 (moderate).

On April 29, 2023 (second meeting), Mrs. T said he still felt itchy in the back area and redness in the back area and also said he often scratched the area that felt itchy until he felt pain due to the scratching. There was a reddish rash on the stomach, the back looked reddish and black, reddish and rough and Mrs. T appeared to be grimacing due to the pain caused by BP: 120/80, N: 97 x/minute, Temperature: 36.5°C, RR: 20x/minute. However, after being given virgin coconut oil (VCO), the client's complaints decreased slightly, itching decreased, skin elasticity went from scale 2 (moderately decreased) to scale 3 (moderate), tissue damage from scale 2 (quite increased) to scale 3 (quite decreasing),

On April 30, 2023 (third meeting), Mrs. T said he still felt itchy in the back area and redness in the back area and also said he often scratched the area that felt itchy until he felt pain due to the scratching. There was a reddish rash on the stomach, the back looked reddish and black, reddish and rough and Mrs. T appeared to be grimacing due to the pain caused by BP: 120/80, N: 97 x/minute, Temperature: 36.5 oC, RR: 20x/minute. However, after being given virgin coconut oil (VCO), the client's complaints decreased slightly, itching decreased, skin elasticity went from scale 2 (moderately decreased) to scale 3 (moderate), tissue damage from scale 2 (quite increased) to scale 3 (quite decreasing).

On May 1, 2023 (fourth meeting), Mrs. T said he still felt itchy in the back area and there was redness in the back area and also said he often scratched the area that felt itchy until he felt pain due to the scratching. There was a reddish rash on the stomach, the back looked reddish and black, reddish and rough and Mrs. T appeared to be grimacing due to the pain caused by BP: 130/80, N: 97 x/minute, Temperature: 36 oC, RR: 20x/minute. However, after being given virgin coconut oil (VCO), the client's complaints decreased slightly, the itching decreased, and the elasticity went from scale 2 (moderately decreased) to scale 3 (moderate) as evidenced by the skin looking quite moist which was initially dry and scaly.

On May 2, 2023 (fifth meeting), Mrs. T said that he did not feel itchy in the back area and there was no redness in the back area and also said that he did not often scratch the area that felt itchy. The reddish rash on the stomach had started to improve, the redness and blackness of the back had disappeared, reddish and rough and Mrs. T did not appear to be wincing due to the pain caused by BP: 130/80, N: 97 times/minute, temperature: 36° C, RR: 20 times/minute. However, after being given virgin coconut oil (VCO), the client's complaints decreased slightly, the itching decreased, and the elasticity went from scale 2 (moderately decreased) to scale 5 (increased) as evidenced by the skin looking quite moist which was initially dry and scaly.

Conclusions from the evaluation results of the application of virgin coconut oil to Mrs. T. Namely: complaints felt by the client have decreased, the itching has decreased, complaints felt by the client have decreased slightly, the itching has decreased, elasticity from scale 2 (moderately decreased) to scale 5 (increased) is evidenced by the skin looking quite moist which was initially dry and scaly, tissue damage from scale 2 (moderately increased) to scale 5 (decreased) it was proven that inflammation around the skin area decreased which initially had a red rash, damage to the skin layer from scale 2 (moderately increased) to scale 5 (decreased) the results were obtained the reddish rash on the skin decreases, the blackened sore spots decrease

DISCUSSION

Analysis of Nursing Care for the Elderly by Giving Virgin Coconut Oil (VCO) to Overcome the Problems of Skin Integrity Disorders in Dermatitis at Jambangan Nursing Homes, Surabaya

The results of the investigation found that Mrs. T is a 77-year-old female which in line with research from Dewi et al. (2017) which found that respondents aged 50 years and over had a large percentage of skin integrity disorders. According to researchers, increasing age causes a person to experience a decline in body function, making them susceptible to disorders in their body, one of which is a decline in the integumentary system.

Based on the results of the anamnesis and observations made during the assessment, a diagnosis of skin integrity disorders related to the aging process was confirmed, characterized by Mrs. T said he felt itchy in the back area. There was redness in the back area, Mrs. T also said that he often scratches areas that feel itchy until he feels pain due to the scratching. There was a reddish rash on the stomach,

the back looked reddish and black, reddish and rough and Mrs. T appeared to be grimacing due to the pain caused by BP: 140/90, N: 97 x/minute, Temperature: 36.5 °C, RR: 20 x/minute.

According to (National & Pillars, 2020) this is by the statement. As humans age, a degenerative aging process occurs which usually has an impact on changes in the human soul or self, not only physical changes but also cognitive, emotional, social, and sexual changes. Physical changes are characterized by a decrease in tissue function, thereby reducing the function of body organs, such as skin elasticity and wrinkles

The independent intervention carried out was by administering virgin coconut oil (VCO) for 3 days, twice a day, namely after bathing in the morning and after bathing in the afternoon. The intervention given to Mrs. T was carried out according to the theory (Dewi et al., 2017) namely virgin coconut oil (VCO) can help reduce skin integrity disorders in dermatitis sufferers because it contains medium chain saturated fat which easily penetrates the deep layers of the skin and maintains skin elasticity and suppleness. Lauric acid and capric acid contained in virgin coconut oil (VCO) can kill viruses, these compounds include monoglyceride compounds which have antiviral, antibacterial, antibiotic, and antiprotozoal properties. The technique used must be correct and by existing standard operating procedures (SOP). If the technique of administering virgin coconut oil (VCO) is carried out correctly, skin integrity disorders can be overcome with the expected results of virgin coconut oil (VCO) which can be done independently by the client with the help of a nurse.

Analysis of the Implementation of Giving Virgin Coconut Oil (VCO) to Elderly People with Dermatitis

An intervention was carried out with the application of virgin coconut oil (VCO) as given by the author based on the main complaints, namely itching and a rash on the back. The implementation was carried out for 5 days, carried out 2 times in 1 day, namely after bathing in the morning and after bathing in the evening. The action taken is to position the patient comfortably, then clean the area on the client's back that feels itchy, then clean it using a towel, and apply virgin coconut oil (VCO) evenly to the itchy area. The rash appears slowly and gently, and after that put-on clothes. Client and arrange the client's position comfortably again, tidy up the equipment, and record the client's response after administering virgin coconut oil.

The application of virgin coconut oil (VCO) on TEWL (Trans Epidermal Water Loss) is very significant in that virgin coconut oil (VCO) acts as an occlusive, coating the SC to slow TEWL, the weakened skin barrier is then strengthened, and can fight harmful substances (Castro & Apostol, 2017).

According to researchers, this is because virgin coconut oil (VCO) contains ingredients that are good for the skin, namely making the skin soft and moist so that it can reduce diffusion resistance and vitamin C which acts as an antioxidant and free radical inhibitor.

According to the theory of Dewi et al. (2017), virgin coconut oil (VCO) aims to reduce itching in elderly people affected by wounds caused by atopic dermatitis and make elderly skin more awake.

According to researchers, virgin coconut oil (VCO) has lauric and oleic acids which are effective and safe to use as a moisturizer on the skin. It can increase skin hydration and make the skin moist virgin coconut oil (VCO) which contains antifungals, virgin coconut oil (VCO) can be used as a solution to treat inflammation in wounds.

According to researchers, virgin coconut oil (VCO), with the main content of lauric acid, has antibiotic, anti-bacterial, fungal, and anti-viral properties. The body processes lauric acid into monolaurin which destroys very dangerous viruses and the very common *Candida Albicans* fungus. cause infection in humans.

LIMITATIONS

The limitation in implementing the application of virgin coconut oil (VCO) is that clients have difficulty reaching the area with the reddish rash when applying virgin coconut oil (VCO). In overcoming these limitations, the author provides an alternative to creating an SOP for administering virgin coconut oil (VCO) which is posted near the patient's bed, as well as placing virgin coconut oil (VCO) near the patient, so that if the patient needs help administering virgin coconut oil (VCO) is easier.

CONCLUSION

The results of the nursing analysis on Mrs. T, who suffers from dermatitis, often complain of itching in the back area. There is a reddish and black rash in the back area and a habit of scratching which causes pain, a nursing diagnosis of skin integrity disorder was made. A nursing plan was given in the form of administering virgin coconut oil (VCO) by Evidence. Based Nursing (EBN) with the outcome of decreased itching, increased skin elasticity, decreased tissue damage, and decreased skin layer damage. The results of the analysis of implementation nursing care on the effect of giving virgin coconut oil (VCO) to Mrs. T decreased. Damage to the skin layer decreases. Which means there is a reduction in itching and damage to the skin layer.

AUTHOR CONTRIBUTION

Authors' contributions: All the authors contributed equally to the study.

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Dewi Puspita Anggraini	: None.
Chilyatiz Zahroh	: None.
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CONFLICT OF INTEREST

The authors declare that there was no conflict of interest.

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