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STASIS DERMATITIS IN PRIMARY CARE: A CASE REPORT AND MANAGEMENT REVIEW

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ABSTRACT

Background: Stasis dermatitis is a chronic inflammatory skin disease caused by venous insufficiency that generally affects the lower legs, characterized by erythema, scale, erosion, crusting, and sometimes skin ulceration. Risk factors for stasis dermatitis include age over 50 years, obesity, trauma and female gender. **Case Presentation:** We report a 62-year-old man complaining of mild itching on the right leg for 1 week. Initially, the patient complained of hyperpigmentation in his right leg skin for 1 year. On examination, we found a patient has hypertension with 168/82 mmHg blood pressure. Patient in the past was diagnosed with hypertension but never taking any drugs. Skin examination in right leg skin found edema with multiple erythematous macules, irregular edge, circumscript, confluence and multiple erosions were found, atrophie blanche and lipodermatosclerosis were also found in the distal 2/3 of the right lower leg. The patient was given topical corticosteroid therapy, moisturizers and compression. Elevation was performed while sleeping. The patient was given antihypertensive drugs captopril 25 mg x 2 and loratadine 10 mg x1 for reducing itchiness . The patient was referred to vascular surgery for further evaluation. **Conclusion: S**tasis dematitis is a chronic skin disease is one of the most overlook to diagnose in primary health care, the role of primary care is to give intervention from early stage to prevent worsening of the disease

BACKGROUND

Stasis dermatitis is a skin disease caused by chronic inflammation due to venous insufficiency. Stasis dermatitis is affecting the lower extremity because of venous hypertension that cause by damage of venous valve or obstruction in venous and causing inflamatory response. Chronic venous insufficiency is the beginning point of stasis dermatitis the abnormal flow of venous causing inflamatory process that manisfesting in the skin. [1]

There is indicated that the prevalence of chronic insuficiency disease in the general population varied from <1% to 40% for woman and < 1% to 17% in men. It is estimated the prevalance stasis dermatitis in United States aged >50 that between 6 %-7% (15-20 million people) and for people age > 70 around 20 %. The prevalence of each country may vary, it is expected to increasing due to aging population. Static dermatitis patients usually occur in patients aged >50 years, generally patients have one or more chronic diseases such as diabetes or hypertension.[2, 3]

Several risk factors are associated with stasis dermatitis, including female gender, pregnancy, older age, obesity, prolonged immobility, family history of venous disease, heart failure, previous lower extremity trauma/surgery, calf muscle injury, and history of deep vein thrombosis. Several of these risk factors can trigger venous insufficiency and in the long term cause stasis dermatitis.[3]

It was initially thought that the cause of stasis dermatitis was due to the low oxygen supply to the tissue because of fibrin cuffs encasing dermal capillaries disrupting diffusion, causing epidermal changes. but now chronic inflammation has been recognized to play a major role in skin changes. Venous hypertension causes a large amount of leukocyte extravasation into the tissue, resulting in an uncontrolled inflammatory response. Leukocyte

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infiltration into the tissue causes the release of inflammatory mediators resulting in many inflammatory cells such as macrophages and T cells accumulating in the tissue causing a prolonged inflammatory response. Matrix Metalloproteinases is a proteolytic enzymes that secreted by inflamatory cells that causing degrade matrix extracellular that can causing lesion on skin.[4, 5]

The initial symptoms and signs of stasis dermatitis are itchy, scaly, reddish, and discolored skin from the surrounding skin and swelling especially in the lower leg area; Symptoms and signs when the disease has entered a more advanced stage are ulcers on the legs which are commonly called venous ulcers. This disrupted skin barrier condition poses a risk for secondary skin infections such as erysipelas or cellulitis. [6, 7]

Healthcare workers sometimes overlook for the disease and more focused on the chronic disease that may underlying it like diabetes and hypertension. This disease can also have symptoms and signs similar to other diseases such as cellulitis or erysipelas, contact dermatitis, atopic dermatitis, psoriasis, pigmented purpuric dermatoses, xerotic eczema, vasculitis, and cutaneous T-cell lymphoma. Both of these things cause conditions in the early phase to progress because the diagnosis and treatment was in more advanced stage of the disease.[6, 8]

CASE PRESENTATION

A 62-year-old man came to the Kebayoran Baru Primary Health Center, Jakarta on August 8, 2024, with complaints of itching and visible wounds on the lower left leg. Initially, the patient had felt that the skin on his left leg looked darker than before for 1 year. The patient had a history of hypertension but did not have regular check-ups. The patient denied a history of trauma and applied medication to his feet. The patient had never suffered from a disease like this before. No family members had ever suffered from the same disease. The patient works as a merchant and often stands for too long. The patient had never received treatment for this complaint.

On physical examination, the patient's general condition was found to be good, compos mentis, blood pressure 168/82 mmHg, pulse 82 times/minute, respiration 19 times/minute. The patient weighs 54 kg and height 167 cm with a body mass index of 19.4 in the normal category. On dermatological examination, lesions were found in the form of edema and multiple hyperpigmented erythematous macular irregular edge, circumscript, confluence and multiple erosions, atrophie blanche and lipodermatosclerosis were found in the distal 2/3 of the right lower leg.

Figure 1. The photo of patient lesion on right lower leg

The patient's disease was then differentially diagnosed as stasis dermatitis, cellulitis, vasculitis and atopic dermatitis. The working diagnosis in this patient is stasis dermatitis. The patient was then given education about his disease and the factors that can play a role in the disease. The therapy given to the patient was in the form of 0.1% betamethasone valerate cream on lesion the leg to reduce itching and given *metcovazin*® ointment containing zinc and chitosan as a moisturizer.

Then the patient was given a pressure bandage. The patient was given therapy in the form of loratadine tablets 10 mg tablets/day and antihypertensive drug captopril 25 mg/ twice a day . The patient was also advised to elevate his legs when sleeping at night using pillows. The patient was referred to a vascular surgeon for further evaluation.

DISCUSSION

In this patient, it was found that the patient was elderly and it was found that the prevalence of stasis dermatitis increased at the age of over 50 years. [1] The patient admitted to working as a merchant so that he had a tendency to stand too long, this could cause stasis of blood flow. [9] A history of chronic hypertension that was never controlled was an indirect cause of this condition causing decreased blood

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circulation to the tissue which resulted in chronic inflammation. [7]

On examination, multiple erythematous macules, irregular edge, circumscript, confluence and multiple erosions were found in the distal 2/3 of the right lower leg, atrophie blanche and lipodermatosclerosis were also found. In stasis dermatitis, chronic venous insufficiency is most common found in stasis dermatitis, this insufficiency causes increased pressure in the veins. The increased pressure in the vein causes the extravasation of macromolecules including fibrinogen which cause fibrin cuffs in dermal capillaries, reducing the blood supply to the tissue. Leukocytes also play a role in this so that they will release inflammatory mediators and trigger inflammation and fibrosis in the skin. atrophie blanche is a white healing scar that is often found in patients with venous insufficiency while lipodermatosclerosis is thickening of the skin that is sometimes red or hyperpigmented due to chronic inflammation.[10]

In this patient, the skin was treated with a medium-potency corticosteroid ointment, betamethasone valerate 0.1% cream. In the research, topical corticosteroid administration can reduce itching complaints on the patient's skin, thereby reducing scratching that can affect healing in the skin. [7] After that, metcovazin® ointment was given, an ointment consisting of zinc and chitose. Zinc itself can accelerate healing in the skin by accelerating skin re-epithelialization. [11] Chitosan plays a role in helping to stop bleeding by encouraging platelet aggregation and inhibiting the destruction of fibrin at the hemostasis stage and accelerating the growth of granulation tissue. [12]

On the leg, we gave a pressure bandage, this pressure bandage functions to reduce swelling and increase venous return. [8] Patients were also given education to increase mobility and reduce standing and elevate their legs 45 degrees while sleeping to reduce blood pressure in the extremity veins due to poor flow. [9]

Patients were also referred to vascular surgery for further evaluation. Patients were given antihypertensive therapy in the form of captopril 25 mg twice a day to control blood pressure. This choice was made because giving antihypertensives in the form of calcium channel blockers has a common side effect in the form of edema in the legs.[15]

Treatment of stasis dermatitis include the management effects of the underlying chronic venous insufficiency such as the edema, itching or pain, changes in skin lesions and preventing complications from the disease. Therapy in the early stages of this disease is compression therapy, this therapy can use compression stockings or the use of bandages. However, this has several consequences, repeated use of compression stockings can reduce effectiveness because repeated use can decrease the elasticity and the use of inappropriate pressure bandages do not produce good compression effects so that professional assistance is needed. [8]

The use of corticosteroid creams has been shown to reduce itching in the skin. Giving the skin a moisturizer shows a good level of skin improvement and accelerating wound healing. In some cases of more advanced stages of the disease, intervention is needed on the underlying cause of venous insufficiency such as surgery or minimally invasive surgery. [16]

CONCLUSION

Statsis dermatitis is a chronic skin disease and often occurs in older individuals. This disease has symptoms similar to other diseases so that sometimes the early intervention is not given so that the disease is already at a more advanced stage. The role of health workers in primary facilities is very important so that the disease can be treated from an early stage and reduce the disease to a more advanced stage

ETHICAL APPROVAL

There is no ethical approval

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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AUTHOR CONTRIBUTIONS

The manuscript and data was prepared by Dimas Farhan Wibawanto. The data were processed by Tiffany Valentina. Theresia Arthati and Dina Evariyana Bangu assisted in the journal article editing and submission.

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