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VARICOSE ULCERS **OF** THE LOWER LEGS

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Abstrak

Gangguan yang sering ditemukan pada bagian ekstremitas bawah adalah gangguan vaskuler. Varises sangat umum ditemukan terutama pada wanita yang disebabkan insufisiensi vena karena buruknya sirkulasi darah seperti adanya refluks dan obstruktif serta dapat diturunkan. Fase kronik dari varises dapat bermanifestasi menjadi ulkus varikosum dengan timbulnya luka di bawah lutut. Lesi yang muncul berbentuk iregular dengan batas yang tegas, ulkus ini dapat dicegah sedini mungkin dengan menangani faktor pencetus terlebih dahulu sebelum merujuk ke arah kronik. Pemeriksaan fisik merupakan proses medis yang harus dilakukan saat mendiagnosis suatu penyakit. Hasilnya dicatat dalam rekam medis yang digunakan untuk menegakkan diagnosis dan merencanakan perawatan selanjutnya. Pemeriksaan fisik akan dilakukan secara sistematis, dimulai dari ujung kepala sampai ujung kaki yang dilakukan dengan empat cara yaitu inspeksi, palpasi, auskultasi, dan perkusi. Ulkus varises adalah manifestasi dari insufisiensi vena kronis. Pasien dengan ulkus varises memiliki riwayat varises yang jika diobati dapat mencegah terjadinya ulkus varises.

Kata Kunci: *Ulkus Varikosum, Varises*

Abstract

Disorders that are often found in the lower extremities are vascular disorders. Varicose veins are very common, especially in women due to venous insufficiency due to poor blood circulation such as reflux and obstructive and can be inherited. The chronic phase of varicose veins can manifest as venous ulcers which is the development of wound below the knee. The lesions appear irregular in shape with clear boundaries, these ulcers can be prevented as early as possible by treating the trigger factor first before referring to the chronic direction. Physical examination is a medical process that must be undertaken when diagnosing a disease. The results are recorded in the medical record which is used to make a diagnosis and plan further treatment. Physical examination will be carried out systematically, starting from head to toe which is carried out in four ways, namely inspection, palpation, auscultation, and percussion. Varicose ulcers are a manifestation of chronic venous insufficiency. Patients with varicose ulcers have a history of varicose veins which, if treated, prevent the occurrence of varicose ulcers.

Keywords: *Venous Ulcers, Varicose Veins.*

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INTRODUCTION

Cruris ulcer is a common disease encountered in dermatology practice. The exact cause of cruris ulcers is unknown but is thought to be caused by trauma, poor hygiene, poor nutrition, disorders of the blood vessels and damage to peripheral nerves. Peripheral nerve damage usually occurs in people with diabetes mellitus and leprosy (Walker et al., 1990). While those caused by vascular disorders are often associated with hypertension. Cruris ulcers are divided into four groups, namely, arteriosum ulcers, tropic ulcers, varicosum ulcers and neutrophic ulcers (Dogra & Sarangal, 2014). The most common forms of lower leg ulcers are varicosum ulcers compared to arteriosum ulcers and neutrophic ulcers. Varicosum ulcers are caused by chronic venous insufficiency which is located below the knee to the middle of the ankle. These wounds arise as a result of trauma and cause tissue and skin damage (Milan, 2019). Varicose ulcers affect more women than men, these ulcers are a manifestation of varicose veins that are not treated early (Fossuo et al., 2018; Harrisya et al., 2022). This disease is characterized by sores that are soft, shallow, irregular and reddish in color. Varicose ulcers can be classified into acute and chronic and can even become cancer if the wound is not treated. In the treatment of varicose ulcers the main thing is to remove the reflux superficial veins or varicose veins (Vasudevan, 2014; Izzati et al., 2022).

A good history is the cornerstone of the diagnosis. Anamnesis is a communication activity carried out between the doctor as examiner and the patient which aims to obtain information about the disease being suffered and other related information so that it can direct the diagnosis of the patient's disease (Bickley et al., 2017). Complaints submitted by a patient who are taken carefully will help determine the diagnosis of a disease (Sularsito & Ulkus, 2015).

From the case discussed, a 45-year-old woman came to the polyclinic with complaints of a wound on her right lower leg. In the history of chronic disease, the patient had no history of diabetes, cholesterol, Morbus Hansen and other injuries and only had a history of varicose veins in the legs (Caprini et al., 2013). Then the accompanying complaints were that the patient's wound was getting wider, there was no pain, there was bleeding from the wound about a month ago. Patients also feel sore, tingling, and sometimes swollen limbs (Meulendijks et al., 2020).

METHOD

Physical examination is a medical process that must be undertaken when diagnosing a disease. The results are recorded in the medical record which is used to make a diagnosis and plan further treatment. Physical examination will be carried out systematically, starting from head to toe which is carried out in four ways, namely inspection, palpation, auscultation, and percussion. The scope of this physical examination will consist of checking vital signs (temperature, pulse, respiratory rate, and blood pressure), physical examination from head to toe, and physical examination of all body systems (such as cardiovascular, digestive, musculoskeletal, respiratory, endocrine, integumentary, neurological, reproductive, and urinary) (Kang et al., 2019).

On physical examination the patient appeared mildly ill and conscious of composition. The results of the physical examination showed that the patient's TTV or vital signs were within normal limits. On physical examination there is a picture of a wound in the area of the dextra medial malleolus, 5 cm in diameter, painless, visible blood vessels and positive crust.

RESULT AND DISCUSSION

Varicose ulcers are open sores that are often found in areas of venous hyperextension in the lower extremities. This disease is a manifestation of chronic venous disease which is located below the knee. There is damage to the soft tissue starting from the subcutis and the changes are sometimes not visible and will develop at any time.

Factors that play an important role during history investigations include swelling of the lower extremities that worsens at night and the feet feel heavy, itchy and feel like pins and needles. The appearance of an ulcer in the medial malleolus area that is irregular in shape and has a firm border. In the presence of varicose veins, edema or venous dermatitis will accentuate the varicose ulcer. Swelling in this ulcer will last more than six weeks and can be referred to as chronic. If the ulcer is not treated as early as possible, especially the trigger factor, it can manifest into cancer.

In this case I took a working diagnosis, namely varicose ulcer because of the patient's history of having varicose veins and ulcers located in the dextra medial malleolus which is a common location where varicose ulcers are often found. Symptoms that arise such as feeling sore and tingling and sometimes swelling accompanied by crusts that describe the symptoms of a varicose ulcer. This diagnosis is also supported by the results of Duplex ultrasound which shows that the patient has chronic venous insufficiency where reflux and obstruction of the veins occur.

Crucic ulcers are open wounds accompanied by loss of the epidermis and part or all of the dermis in the lower extremities and upper extremities caused by infection, vascular disorders, or malignancy.

Ulcus arteriosum is what occurs due to arterial circulation disorders. The most common cause is atheroma that occurs in the abdominal and leg blood vessels, in addition to other causes that are not known for certain. Broadly speaking, the causes of these disorders can be divided into three groups, namely Extra mural - Arterial blood flow is disrupted because the arteriolar blood vessels are pinched by fibrous tissue, for example due to old edema, or by sclerosis due to scleroderma. Mural - Blood flow is impaired due to abnormalities in the walls of blood vessels, eg vasculitis or atherosclerosis. Intra mural - blood flow is disturbed due to blockage of the lumen of small blood vessels, for example due to changes in blood viscosity, adhesions, platelets, fibrinogenesis, and so on. Due to disruption of arterial blood flow, for example narrowing or blockage of the lumen, the tissue will experience hypoxia (ischemia), resulting in changes in the skin. These changes are in the form of skin becoming thin, dry and scaly, cyanotic, reduced leg hair, thickened and dystrophic toenails. As a result, resistance to trauma and infection decreases. Subsequent changes can occur gangrene in the toes, feet and legs, and eventually ulcers develop (Hiola et al., 2023).

Tropic Ulcers - Tropic ulcers are rapidly growing and painful ulcers, usually on the lower limbs, and are more common in malnourished children in the tropics. There are three factors that play an important role in causing this disease, namely trauma, hygiene and nutrition as well as infection by *Bacillus fusiformis* which is usually together with *Borrelia vincentii*. Trauma is a condition that precedes the appearance of ulcers. There is a possibility that the trauma is so small that it doesn't give any complaints, but it is enough for germs to enter. The state of hygiene and nutrition is a very important factor because it affects a person's body resistance to disease. It usually starts as a small sore, then forms a papule which quickly expands into a vesicle. The vesicles then rupture and form small ulcers. After the ulcer is infected by germs, the ulcer extends sideways and inward and gives the typical shape of a tropic ulcer.

Neutrophic Ulcers - Neurotrophic ulcers are ulcers that occur due to pressure or trauma to the anesthetic skin. Due to nerve damage, peripheral neuropathy occurs which results in loss of pain (anesthesia). This happens, for example, in patients with syringomyeli, spina bifida, tabes dorsalis or injury to the nerves. Ulcers of the lower legs and feet are most often found in patients with diabetes

mellitus who have complications from peripheral neuropathy, so they are dangerous because if you step on a sharp object you will not feel it even though an injury has occurred, plus it can easily cause infection. Also in patients with leprosy, ulcers can be found on the feet. Repeated pressure or trauma to the anesthetic area will cause tissue damage. In diabetes mellitus, because of ischemia and a tendency to easily get infections, tissue damage will also occur more easily. Pain and temperature in leprosy sufferers are lost due to damage to the skin nerves, so that the patient is not aware that trauma has occurred in the area. Ulcers most commonly occur on the feet, where the pressure is most intense, namely the heel and metatarsals, usually single or multiple. The ulcer is round, painless, filled with necrotic tissue, usually dry (anhidrotic), the skin around the ulcer is hyperkeratotic (callus). Ulcers can reach the subcutis to form sinuses, even the bones, and can also experience secondary infections.

The cause of varicosum ulcers is impaired blood flow to the lower limbs resulting in venous incompetence and increased venous pressure. Broadly speaking, the cause of interference can come from blood vessels, which is most often thrombosis or thrombophlebitis. Another cause is a venous valve disorder that cannot function properly.

In addition, there are causes that originate outside the blood vessels, for example dams in the proximal lower leg due to tumors in the abdomen, pregnancy or structures in the groin. Another reason is work done by standing a lot, obesity, and heredity.

In varicosum ulcers, only about 50% are accompanied by superficial varicose veins. Sufferers are generally adults and the elderly, women more often than men. More than 80% of varicose ulcers are preceded by deep vein thrombosis. After the thrombus disappears recanalization occurs, but the venous valves remain damaged so that blood flow is disrupted. Varicosum ulcers that occur due to pumping failure by the calf muscles resulting in venous hyperextension or increased venous pressure. Normally, venous return of blood requires contraction of the calf muscles. Deep vein located in the fascia of the calf muscle compartment. In a standing state, blood flow must fight gravity to return to the head from the feet. Venous blood flow is from the perforating veins and follows a pressure gradient from the increased hydrostatic pressure in the superficial veins. If you have abnormal pressure in the superficial or deep veins it will result in hyperextension of the veins.

If there is a dam in the proximal area, for example thrombosis, or damage to the lower leg venous valves, especially the deep veins, especially after DVT, the venous pressure will

increase. As a result of this situation will arise edema that starts around the ankle. The venous capillary pressure will also increase and the red blood cells will come out and then enter the tissue causing bleeding (purpura) which was originally seen as red spots gradually turning black. There is an inflammatory process due to leukocytes, endothelial damage, platelet aggregation occurs, and intracellular edema, all of which participate in ulcer formation and impaired wound healing. Superficial veins dilate and elongate tortuous worm-like (varicose veins). This situation is more clearly seen when the patient is standing.

If it lasts a long time, the tissue that was originally swollen will be replaced by fibrotic tissue, so that the skin feels stiff or hardened. This will result in tissue somewhere experiencing food supply disruption due to ischemia, necrosis gradually. Usually this is accompanied by static dermatitis. The most common place is slightly proximal to the medial malleolus because in the medial lower leg there is v. saphena magna while laterally there is a smaller v saphena parva.

Varicose ulcers are a manifestation of chronic venous insufficiency or CVI. The initial symptom of a varicosum ulcer is the discovery of a wound located under the knee, more precisely on the medial malleolus. The lesions that arise are soft textured with irregular shapes and well-defined borders. In addition, sufferers usually feel heavy limbs, pruritus, pain and edema. 11 Discoloration of the skin to a brownish color which is red blood cells leaking into the tissues and the presence of atrophic and hardened lesions (lipodermatosclerosis).

In its early stages, varicose ulcers are often misdiagnosed because their symptoms are similar to those of an insect bite, scratch or mild irritation, with the appearance of a red, irritated skin-like lesion. The second stage, there is inflammation of the skin with a little discharge and dry or cracked areas of the lesion. The third stage, the skin on the ulcer area begins to die. The wound will start to look inflamed and deeper like an ulcer. Sometimes at this stage, the ulcer goes through the healing phase and will open again. Fourth Stases, Open wounds that are very visible and cannot heal on their own and must be kept clean.

Prevention that can be done to prevent varicose ulcers such as the use of socks / stockings, and superficial veins or perforations, sclerotherapy, exercise and elevation of the limbs and changing lifestyles. Sock therapy has been shown to prevent ulcer return with daily use. Moisturizers, diets, supplements, quitting smoking, losing weight are things that should be done for people who have a history of varicose ulcers. Educating families and patients about disease, relapse rates, factors that will help and interfere with wound healing and side effects of therapy.

If left untreated, chronic wounds can cause complications such as infection and pain. The worst and rare complication for patients with varicose ulcers is skin cancer which can occur if the wound has not been treated for a long time. The prognosis of varicosum ulcers is determined by the size of the wound and chronicity. Varicose ulcers that are less than one year old and smaller than 10 cm² at the first visit have a 29% chance of not closing within six months. With a 78% increased probability with larger wounds older than one year. There are factors that are also associated in slowing wound healing such as old age, non-white race, high body mass index, calf muscles that have not healed, venous reflux, thrombosis, deep vein involvement and lack of compression height. Ulcers that have healed have a high rate of recurrence.

CONCLUSION

Varicose ulcers are a manifestation of chronic venous insufficiency. Patients with varicose ulcers have a history of varicose veins which, if treated, prevent the occurrence of varicose ulcers. The success of ulcer healing depends on the success of the therapy carried out and prevention of ulcer recurrence.

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