


<h2>Varicose Veins during Pregnancy, Diagnosis and Treatment</h2>		<b>Healthcare</b>
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**Abstract**

Varicose veins are enlarged veins that can be blue, red, or flesh-colored. They often look like cords and appear twisted and bulging. They can be swollen and raised above the surface of the skin. Varicose veins are often found on the thighs, backs of the calves, or the inside of the leg. During pregnancy, varicose veins can form around the vagina and buttocks as well. Spider veins are like varicose veins but smaller. They also are closer to the surface of the skin than varicose veins. Often, they are red or blue. They can look like tree branches with their short, jagged lines. They can be found on the legs and face and can cover either a very small or very large area of skin. According to the evidenced based medicine studies, about over 50 percent of women in the United States of America suffer from some type of vein problem. During pregnancy, there is a huge increase in the amount of blood in the body; this can cause veins to enlarge. The growing uterus also puts pressure on the veins. Varicose veins usually improve within 3 months after delivery. More varicose veins and spider veins usually appear with each additional pregnancy. Physical exam and ultrasound examination are important in early diagnosis. Considering that in Albania even though the medical service in general is made of primary, secondary and tertiary care, pregnant women do choose either to follow up their pregnancy at tertiary care centers or neglect the medical care during pregnancy because of lack of awareness of possible complication. This piece of paper will be focused on varicose veins during pregnancy in Albania, early diagnosis and early treatment. Spider veins rarely are a serious health problem, but they may cause uncomfortable feelings in the legs, however, in other cases could have the same symptoms you would have with varicose veins. Varicose veins may not cause any problems, or they may cause aching pain, throbbing, and discomfort. In some cases, varicose veins can lead to more serious health problems if left untreated. In conclusion, since pregnancy is special situation where many physiological changes occur, varicose veins during must be appropriately assessed, diagnosed and early treated in order to minimize the possible serious health problems.

**Introduction**

Varicose veins are enlarged veins that can be blue, red, or flesh-colored. They often look like cords and appear twisted and bulging. They can be swollen and raised above the surface of the skin. Varicose veins are often found on the thighs, backs of the calves, or the inside of the leg. During pregnancy, varicose veins can form around the vagina and buttocks as well. Spider veins are like varicose veins but smaller. They also are closer to the surface of the skin than varicose veins. Often, they are red or blue. They can look like tree branches with their short, jagged lines. They can be found on the legs and face and can cover either a very small or very large area of skin.

Varicose veins occur when veins just below the skin's surface are damaged, become swollen and fill with too much blood. Veins are the blood vessels that return blood to the heart. Arteries carry blood away from the heart to the rest of the body. Varicose veins most commonly occur in the legs. In about 50% of cases, the condition runs in families, and probably is related to an inherited weakness in the veins' walls or the valves inside veins that keep blood from backing up. According to the evidenced based medicine studies, about over 50 % percent of women in the United States of America suffer from some type of vein problem [1]. During pregnancy, there is a huge increase in the amount of blood in the body; this can cause veins to enlarge. The growing uterus also puts pressure on the veins. Varicose veins usually improve within 3 months after delivery [1, 2]. More varicose veins and spider veins usually appear with each additional pregnancy. Physical exam and ultrasound examination are important in early diagnosis.

Pregnancy is another common cause of varicose veins. During pregnancy, the volume of blood increases causing veins to expand. Also, occupations that require uninterrupted standing (waitresses and waiters, nurses, mothers with young children) may force leg veins and valves to work against gravity for hours, increasing the risk of pressure-related vein and valve damage. Garters also can increase the risk of varicose veins if their tight elastics slow blood flow in the legs. Varicose veins are 2 to 3 times more common in women than men [3, 4]. Obese people are more likely to develop varicose veins. Varicose veins can be associated with prior blood clots and damage to the deeper veins in one or both legs, a situation that sometimes can lead to chronic venous insufficiency. When this happens, the veins lose their ability to effectively move blood back to the heart. This can cause significant leg swelling and skin sores or ulcers.

## Discussion

### *Clinical and Diagnostic Approach*

In the legs, varicose veins commonly are found along the inside of the leg, at the ankles and at the back of the calf. The affected veins look blue, swollen or stretched out, kinked or twisted. Illustration of varicose veins in figure 1 (a, b, c).

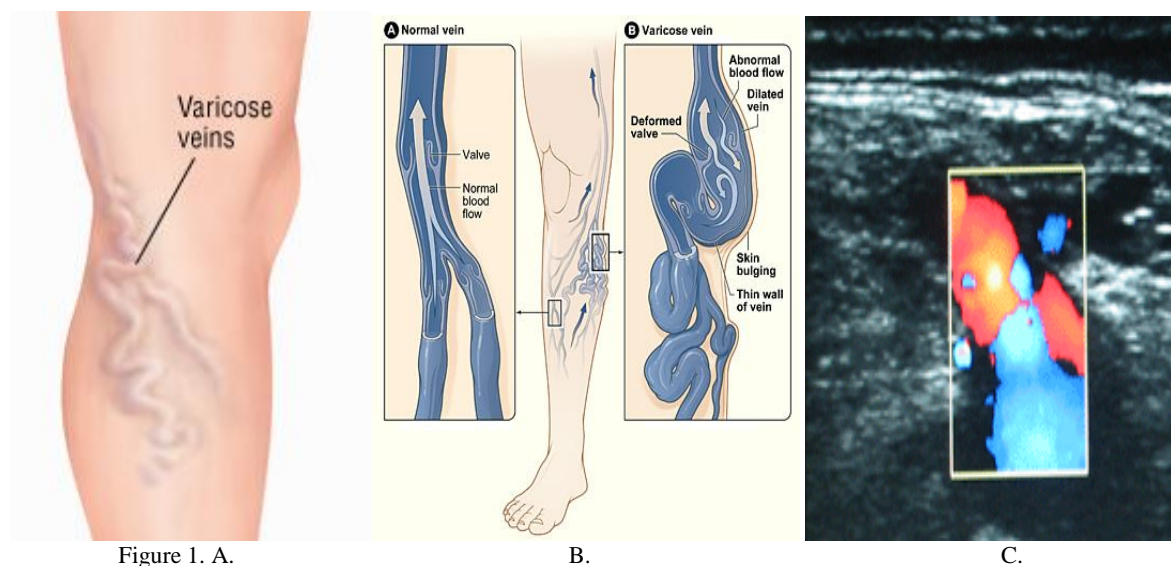


Figure 1. A.

B.

C.

Varicose veins are not generally linked to a serious condition called deep vein thrombosis (DVT) because they occur in superficial veins. However, with severe varicose veins, there is a small increased chance of developing DVT. DVT requires immediate medical attention. Symptoms of DVT include sudden, severe leg swelling and can result in blood clots that travel to the brain or the heart. According to The National Heart, Lung, and Blood Institute - USA, suggests; that people seek immediate medical care if they have: Increased warmth in one area of the leg that is also red or swollen. Pain or tenderness in the leg, this pain is felt only when you walk or stand. Red or discolored skin on the affected leg. Swelling that occurs along a vein in the affected leg. In more severe cases of chronic venous insufficiency, a slowing of blood flow through the vein can lead to localized skin changes, including dryness, a rash or brownish discoloration and open sores (ulcers). Slow blood flow also can cause a clot to form inside the affected vein. This condition is called thrombosis.

The risk of varicose veins is strongly related to age and gender. The following are suggested risk factors for varicose veins: *Obesity*. Obesity is a major risk factor for varicose veins. Excessive weight increases the pressure on the veins of the legs and aggravates the condition. *Pregnancy*. Pregnant women have an increased risk of developing varicose veins due to the hormonal influences of pregnancy on the veins, but the veins often return to normal within one year of childbirth. Women who have multiple pregnancies may develop permanent varicose veins. *Family history*. Heredity is important in determining susceptibility to varicose veins, but the specific factors responsible for this have not been identified. *Inactivity*. Prolonged standing or sitting increases pressure in the veins. *Gender*. Women are particularly susceptible to varicose veins because of the influence of progesterone on the veins and the effects of pregnancy. Women are 2-3 times more likely to have varicose veins [3, 4]. *Age*. Varicose veins usually affect people between the ages of 30 and 70 [5]. With advancing age, the elastic shell of the vein begins to weaken increasing the chance that the vein will dilate.

The obstructive factor is of paramount importance observed in pregnancy, such as gluteal and vulvar varicose veins. Such varices indicate communications between superficial veins and the deep pelvic system and are most likely to disappear completely in the postpartum period. Furthermore, varicosities whose main origin is in the gluteal and pudendal tributaries of the hypogastric venous system are not especially affected by operation directed to the saphenous system. Also, the more radical procedures proposed for use during pregnancy will not adequately solve the problem of incompetent perforators so long as the aggravating feature of increased deep venous pressure, due to the obstruction of the pelvic veins by the growing pregnancy, exists.

To some extent, varicosity in pregnancy is a reversible process, and the milder forms may resolve completely in the postpartum period. A certain degree of resolution of the more severe forms of varicosity can also be expected following pregnancy, depending upon the tissue elasticity of the individual. From clinical observation and what is known of the pathological changes that take place in the development of varices, it is clear that radical surgical treatment of varicose veins during or preceding pregnancy is only of temporary value. Moreover, once an extensive operation has been done, the anatomical relationships are so distorted and the normal landmarks so disturbed that it is impossible to carry out a proper surgical extirpation later—a serious consideration in light of the high rate of recurrence. Hence, the basic management of all degrees of varicosity during pregnancy should be conservative.

In addition to a complete medical history and physical examination, diagnostic procedures for varicose veins may include any, or a combination, of the following: However, during pregnancy a special consideration is taken as to minimize the exposure to the fetus thus in first trimester of pregnancy only ultrasound examination is suggested as preferred diagnostic method. To mention a

few diagnostic imaging tools in diagnosis of varicose veins; *Duplex ultrasound*. A type of vascular ultrasound procedure done to assess blood flow and the structure of the leg veins. The term "duplex" refers to the fact that two modes of ultrasound are used-- Doppler and B-mode. The B-mode transducer (like a microphone) obtains an image of the vessel being studied. The Doppler probe within the transducer evaluates the velocity and direction of blood flow in the vessel. *Color-flow imaging (also called triplex ultrasound)*. A procedure similar to duplex ultrasound that uses color to highlight the direction of blood flow. Vessels in which blood is flowing are colored red for flow in one direction and blue for flow in the other, with a color scale that reflects the speed of the flow. *Magnetic resonance venography (MRV)*. A diagnostic procedure that uses a combination of a large magnet, radiofrequencies, and a computer to produce detailed images of organs and structures within the body. An MRV uses magnetic resonance technology and intravenous (IV) contrast dye to visualize the veins. Contrast dye causes the blood vessels to appear opaque on the X-ray image, allowing the doctor to visualize the blood vessels being evaluated. MRV is useful in some cases because it can help detect causes of leg pain other than vein problems.

Considering that in Albania, in general public medical system fails to offer well organised patient education program, proper pre conception care to prospective pregnant women, lack of family planning service. Even though, the medical service, theoretically, in general is made of primary, secondary and tertiary care, pregnant women do choose either to follow up their pregnancy at tertiary care centers or majority of them neglect the medical care during pregnancy because of lack of awareness of possible complication. Thus, proper programs of patient education, information, early medical care to pregnant women must be designed and applied to public medical system.

Specific treatment for varicose veins will be determined based on: patient age, overall health, and medical history. Extent of the condition. Present signs and symptoms. Patient tolerance of specific medicines, procedures, or therapies. Expectations for the course of the condition [6, 7, 8].

Early treatment of varicose veins may reverse the symptoms of venous congestion and minimise the risk of varicose vein-related complications and further progression of the disease. Treatment becomes more urgent if there are coexisting complications such as bleeding, inflammation (phlebitis), clots (thrombosis), dermatitis or ulcers. In general, it is much easier to treat varicose veins when they are smaller, as early treatment tends to be less complicated and less involved. It is recommended that varicose veins be treated before pregnancy, since complications such as clotting and bleeding can develop during pregnancy. Varicose veins that have worsened during pregnancy may not fully recover after pregnancy, requiring more involved and complicated treatment than would have been required before pregnancy. Spider veins should be treated only after the varicose veins have been successfully treated. Medical treatment may not be necessary if there are no symptoms. However, varicose veins may sometimes worsen without treatment. Treatment for varicose veins involves both surgical and nonsurgical approaches [6, 7, 8, 9].

Nonsurgical methods for treating varicose veins include: *Elevation of the legs*. You may be instructed to elevate your feet above the level of your heart three or four times a day for about 15 minutes at a time. If you need to sit or stand for a long period of time, flexing (bending) your legs occasionally can help keep blood circulating. If you have mild to moderate varicose veins, elevating your legs can help reduce leg swelling and relieve other symptoms. *Compression stockings*. These elastic stockings squeeze or compress the veins and prevent blood from flowing backward. In addition, compression stockings may help with healing of skin sores and prevention of additional sores. Compression stockings are effective in treating varicose veins if worn daily and may prevent the need for more invasive treatment. *Sclerotherapy*. Sclerotherapy is the most common treatment for both spider and varicose veins. This procedure involves a saline or chemical solution that is injected into the varicose veins that causes them to harden so that they no longer fill with blood. Blood that would normally return to the heart through these veins returns to the heart by way of other veins. The veins that received the injection will eventually shrivel and disappear. The scar tissue is absorbed by the body. *Laser treatment*. Laser treatment is a type of treatment for varicose veins. Until recently, laser treatment was mainly used for treatment of spider veins on the face. However, newer laser technology can now effectively treat varicose veins as well. There are several types of lasers that may be used to treat varicose veins. The doctor inserts a tiny fiber into a varicose vein through a catheter. The fiber sends out laser energy that destroys the diseased portion of your varicose vein. The vein closes and your body eventually absorbs it. *Ablation*. Ablation involves the insertion of a thin, flexible tube called a catheter inserted into a varicose vein. The tip of the catheter heats the walls of the varicose vein and destroys the vein tissue. Once destroyed, the vein is no longer able to carry blood and is absorbed by your body. Surgical approaches to the treatment of varicose veins include: *Vein stripping*. This procedure involves tying off all varicose veins associated with the leg's main superficial vein and removing it from the leg. The removal of veins from the leg will not affect the blood circulation in the leg as deeper veins will be able to take care of the increased blood circulation. *Small incision avulsion*. This procedure involves passing hooks through small incisions, and may be done alone or together with vein stripping. *Transilluminated powered phlebectomy*. This vein removal procedure makes use of a bright light to illuminate the vein. A device is passed through a tiny incision and removes the vein with suction.

The basis of conservative medical management is an adequate elastic support consisting of medium weight elastic stocking extending from the toes to the mid thigh. The support must be of sufficient strength to keep the varicosities fully compressed when the patient is standing. In addition, elevation of the foot of the bed on six-inch blocks and frequent rest periods during the day with the legs elevated above the level of the heart will help promote venous return. During the last few weeks of pregnancy this position may have to be discontinued if the enlarged uterus causes dyspnea. Prolonged standing in one position or sitting with the feet dependent should be avoided. The patient must not use circular elastic garters. Finally, weight gain should be kept to a minimum and obese patients should be encouraged to lose weight. These simple measures will adequately control minimal and moderate varices, and in many cases will control the symptoms of severe varices. Surgical intervention during pregnancy is indicated only for severe symptoms, clearly due to varicosis, or because of objective findings that are manifestations of progressive venous stasis. One would consider operation for a woman who has pronounced sensation of heaviness, fullness or pain in the legs that cannot be relieved by elastic support, or who has signs of venous stasis such as dermatitis, increasing pigmentation or ulcer formation uncontrolled by conservative means.

For such patients we limit the surgical procedure to a high ligation and division of the main incompetent venous trunks and division of the immediate tributaries. This procedure, whether involving the long or the short saphenous veins, can easily be carried out between the third and seventh months of pregnancy, using local anesthesia and permitting the patient to remain ambulatory. So simple a procedure is effective in interrupting the head of pressure in the long or short saphenous system. Combined with proper medical management this procedure will effectively control the symptoms of severe varices. Neither surgical operation nor sclerotherapy should ever be advised for cosmetic reasons during pregnancy [9].

### Conclusions

Medical professionals should not lose sight of the fact that in gravid women should be assessed as early as possible for varicose vein all pregnant women, and refer them to respective specialist for proper diagnosis, and management. Failing to do so, may result in complication during pregnancy, during childbirth and post delivery. So, special consideration with multidisciplinary approach is the best medical care.

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