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ON VARIX,
WITH SPECIAL REFERENCE TO
VARICOSE VEINS IN THE LOWER EXTREMITIES,
AND VARICOCELE,

by

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ON VARIX,
WITH SPECIAL REFERENCE TO
VARICOSE VEINS IN THE LOWER EXTREMITIES,
AND VARICOCELE.

Since 1907, when the "Workmen's Compensation Act" was modified to include seamen, the Shipping Federation has arranged for the periodical examination of seamen every six months.

Being one of those appointed to look after the seamen in Leith, I started on my duties on July 19th., 1907. Previous to the operation being started, several of the examiners from the principal ports of the kingdom were summoned to London to draw up a few rules for the guidance of the various medical examiners. One of them read thus:-

"Varicose veins, if any tendency to ulceration. Otherwise, to be passed, if the man presents himself wearing a suitable support."

I soon found ^{out} that a number of the men were affected with varicosity in one form or another. From July, 1907, to December, 1910, I examined 2393 men of all grades, and of these 299 were affected with varix, or roughly 12.5%.

There were 40 masters, and 3 were affected, or 7.5%.

There were 166 officers, and 23 were affected, or 13.85%.

There were 73 Chief Engineers, and 7 were affected, or 9.6%.

There were 121 Engineers, and 15 were affected, or 12.4%.

There were 297 Cooks and Stewards, and 30 were affected, or 10.1%.

There were 1696 Seamen and Firemen, and these were about equally divided in each crew, say 848 of each.

Of the 848 Seamen, 93 were affected, or 10.96%.

Of the 848 Firemen, 128 were affected, or 15.09%.

(See table on following sheets.)

On examining the men, the great majority of them were unaware that they had anything the matter with them until I pointed out the dilated condition of the veins. They never had any pain or discomfort. Some said they had had them as long as they could remember. Nearly all of them strongly objected to wear any form of support, and with those who I thought should get supports at once, it was only on the threat of detaining them on shore that they got them.

This list will differ from those compiled in Hospitals or places where men have gone to seek advice on account of pain or discomfort. My subjects were in the best of health and strongly resented the statement that there was anything abnormal about them.

I took no note of the ages of the men at the time of examination, but the great majority of them were between the ages of twenty and forty.

Varicose Veins of the Legs.

	Number of men examined.	Number of Cases.	Right Leg.	Left Leg.	Both Legs
Masters	40	2	1	1	-
Officers	166	16	2	10	4
Chief Engineers	73	5	1	2	2
Engineers	121	7	1	3	3
Cooks & Stewards	297	15	7	5	3
Seamen	848	45	16	19	7
Firemen	848	79	29	23	27

Varicocele.

	Number of Cases.	Left Side.	Right Side.
Masters	1	1	-
Officers	7	6	1
Chief Engineers	2	2	-
Engineers	6	5	1
Cooks & Stewards	13	13	-
Seamen	45	44	1
Firemen	33	33	-

Varicose Veins and Varicocele.

	Number of Cases.	Varicose Veins of Legs.			Varicocele.	
		Right.	Left.	Both.	Right.	Left.
Masters	-	-	-	-	-	-
Officers	-	-	-	-	-	-
Chief Engineers }	-	-	-	-	-	-
Engineers	2	1	1	-	-	2
Cooks and Stewards }	2	1	1	-	-	2
Seamen	3	2	1	-	-	3
Firemen	16	10	3	3	-	16

Aetiology.

The causes given for varix are many, but, generally speaking, one may say that whatever interferes with the free return of blood to the heart may cause it.

Obstructive disease in the right side of the heart, chronic emphysema, and any other disease preventing the free return of blood to the right side of the heart, will check the free passage of blood and cause relative venous stasis tending to produce varicosities.

Again, any hindrance to the blood-flow in the arteries or capillaries will withhold the vis a tergo necessary for driving the blood along the veins. Thus the blood current will be retarded and the increased pressure on the vessel wall will cause dilatation.

In many cases veins get dilated and varicosed independently of all obstruction, or overwork, or obvious degeneration or weakening of their walls.

Most of the so-called originating causes which determine either the increase of the disease or of certain symptoms connected with it are not necessarily associated in any way with its real origin. A large proportion originate in congenital defects in the venous apparatus. Sometimes these defects are hereditary, more especially those in the right leg.

That many cases depend upon a peculiarity in the veins themselves can be inferred from the way in which severe varix develops in men who are robust

in all other respects, with no constipation or other condition likely to produce this affection.

Varix affects all classes -- active and sedentary, weak and strong, short and tall, and to a great extent is independent of occupation. Under similar circumstances it will develop in one limb only, leaving the other unaffected entirely, or until a much later period in life.

The most generally accepted causes given for varix in the lower limbs are:-

Disease of the Liver and Heart.

Obliteration of a large vein following upon the formation of a thrombus, in such diseases as typhoid fever, gout, and other affections, and from injury.

Local pressure, as from tumours and faecal masses.

Pressure of a long column of blood, as in the internal saphena in men who follow occupations necessitating long standing; but it may occur quite independently of times of long standing.

In the right limb varix may occur without any such obvious cause.

Occupation. Long standing, exposure to great heat, and repeated slight injury.

Local constrictions, as from garters.

The pressure of a truss.

As practically all the men whom I have examined and found suffering from varicose veins declared they

had never had a day's sickness in their lives, I might dismiss as the cause among my men such ailments as tumours, aneurysmal varix, dilatation of the right heart, emphysema, thrombi, hepatic disease, obliteration of a large vein following thrombosis, typhoid fever, and discuss such causes as loaded bowel, pressure of a truss, injuries -- as fractures, congenital defects, peculiarities in the veins themselves, occupation, long standing, exposure to great heat, repeated slight injury, stature, and the use or abuse of garters.

Loaded Bowel. From the rapid nature of my examination, I could not make any inquiry as to this being a cause; but as most of the men I examined were employed on ships with short voyages, such as the Baltic, German and French ports, they would escape the monotony of confinement to a restricted area and ^{have} ~~show~~ a much more varied dietary, being so much on shore, that they would not be likely to suffer much from constipation, and from my ordinary practice among seamen I should say that they are rather careful about their bowels.

Pressure of a Truss. A great number of the men suffered from hernia, and almost all wore trusses; many of them had done so for a great number of years, and very few of them suffered from varix.

Injuries -- such as fractures. I did not find a case that was caused by fracture.

Occupation - long standing.

Officers, seamen, engineers and firemen have long spells on their feet, with a very restricted area for movement, and, as compared with any body of workmen on shore, are much more liable to suffer from varicose veins.

The engineers and firemen are exposed at times to great heat, and, on the other hand, officers and seamen are exposed to a great deal of cold; yet a large proportion of both those on deck and those below suffer from varicose veins. My own opinion is that, with the rolling, pitching, and varied movements of the ship, a great strain is continually put on the muscles of the legs to preserve their equilibrium. This will tend to force the blood from the deeper to the more superficial veins, and thus put a great strain on their walls; and those who have any tendency to varicosity or congenital weakness of the veins will thus readily suffer. In the same way, athletes, more especially cyclists, develop varicose veins from the long-continued use of the same sets of muscles.

Congenital defects and peculiarities of the veins themselves.

Certain of the cases may have been due to this cause, as some of them declared that they had had them as long as they could remember.

Repeated slight injuries. I had no complaints from anyone as to this being a cause.

Stature. I took no particular note as to their height. It is recorded that tall men suffer more from **varicosity** above the knees, and short men from varicose veins below the knees. (Bennett, page 16.)

Garters. I examined a great number of men who wore garters. Almost all **the** seamen hailing from the Orkney and Shetland Islands, and almost all the men in **the** Orkney and Shetland ships, wore one or more pairs of drawers, and those drawers were all tied, and firmly tied, below the knees, more so in the older men. They informed me that they had worn them thus all their lives, and I must say that few, if any, of them were troubled with varicosity. In regard to the other seamen and firemen with varicose veins, very few, if any, of them had ever worn either garters or suspenders.

Varicocele.

As it occurs in a so much greater percentage on the left side than on the right side, this is supposed to be due to the left spermatic vein having a very tortuous course and entering the renal vein at a right angle, while the right spermatic vein opens into the lower vena cava. Also **the** loaded sigmoid colon lies in front of the left spermatic vein. The left testicle is, as a rule, slightly lower than the right, so that there is a slightly longer column of blood on that side. Varicocele in older men may

result from pressure of malignant glands on the renal vein.

Morbid Anatomy.

Dilatation of a vein occurs when excess of strain is thrown on its walls from any cause whatever. When the excess of strain continues and is prolonged, certain changes occur in the walls of the veins. Hypertrophy of the muscular coat takes place, and hyperplasia of the connective tissue in all the coats. Should the cause of the dilatation continue, the vessel becomes thicker and longer and thus assumes a tortuous condition, wavy in outline and irregular in calibre; the valves are hypertrophied and soon become useless, being far too small to support the enlarged column of blood in the greatly dilated vessel, and in time are reduced to fibrous cords. The blood may stagnate behind the valves and form thrombi. After long-continued dilatation, the tissues round about thicken, fibrous tissue forms and involves the blood vessels, encroaching on their calibre and strangling them; thus the vessels of the skin over a varicose vein are destroyed, and an ulcer tends to form. Or the vessel as it approaches the surface may by its pressure cause thinning instead of thickening, and ultimately rupture, when a great deal of blood may be lost.

The dilatation usually commences above the valves and is always most marked there. When we

stand erect, the column of blood in the veins of the legs is, as it were, supported at each valve and the portion of the vessel forming the valvular sinus. Hence this part of the vessel is the first to dilate. When the blood-pressure is increased, the first sign of varix is an exaggeration of the knotted state of the vein. At the outset each valve forms a kind of fixed point, the dilatation occurring at its level and diminishing as the valve next above is approached. As the dilatation increases and extends up from the valve, the vein increases in length as well as in calibre, and in order to be accommodated, it begins to form curves or convolutions. Thus begin those sinuosities which are so characteristic of varicose veins, and which tend to increase as time goes on. Dilatation renders the valves incompetent, and this occurs all the sooner as the region of the valves is the part where the pressure is most exercised. When the valves become incompetent, the pressure tells much more on the walls of the veins, as the column is not now arrested at intervals. The pressure acts on the most dependent part of the sinuosities and will increase the projection of these.

In these exaggerated dilatations the blood stagnates greatly, and it is not uncommon for thrombosis to occur. The vein is obstructed more or less completely by the thrombus, which may organize. On the other hand, the latter may dry in and become

impregnated with lime salts and form vein stones or phleboliths.

Chronic inflammation in the tissues round the varicosed veins often produces eczema and brown colouration, which may be attributed to haemorrhage by diapedesis from the hyperaemic vessels. The skin is indurated and thickened, and ulceration is often induced. A varicose vein may burst by the ulcerative process, or come to the surface by its increasing dilatation and at last rupture from the pressure within.

The veins of the abdomen are normally devoid of valves, and so it may come about that from the lower leg to the heart there may be a single column of blood without an arresting valve. If a rupture occurs now and the person is in the erect position, a fatal haemorrhage may result.

Varicocele is a dilatation of the veins of the spermatic cord.

Symptoms and Signs.

From the many cases which I have examined, and the ignorance of the presence of slight varicosity in the limbs, evidently the symptoms are few, i.e., in regard to the superficial variety.

Varicosed veins in the deeper tissues give

rise to a few definite and well-marked symptoms, such as numbness, cramps, heaviness of the limb, dull aching pain, deep-seated, swelling, solid oedema, itching and eczema. Cramps are frequent in the muscles in cases of varicose veins.

The pain of varicose veins is characteristic in that on lying down it soon disappears, and on getting up in the morning there is usually no pain at first, but it soon comes on and persists for some time, then becomes easier and disappears; towards evening it usually comes on again above the ankle.

The leg at first may appear quite natural, but on close comparison with the other leg it will usually be found to be a little greater in circumference. The swelling or oedema often gives the leg a marbled appearance and is hard to the touch, only pitting on firm pressure.

On this oedematous condition there is often implanted a very obstinate eczema, which is difficult to treat and may lead to varicose ulcer. The nutrition of the limb is interfered with, and the superficial parts giving way, profuse haemorrhage may result. When the haemorrhage has ceased, the aperture is only indicated by a small dark spot where a minute clot stops the hole.

The varicose ulcer is usually preceded and accompanied by an eczematous skin condition, and, following on some slight trauma, ulceration may occur. It is often found when an ulcer is discharging

freely, more especially a copious watery discharge, that the pain is very much easier, and should the ulcer heal up, the pain may return, due to exudation from the dilated veins.

Varicocele is generally painless, but is sometimes associated with neuralgia or hyperaesthesia of the testicle. The patient may complain of a feeling of weight or uneasiness in the part on standing for a long time, or prolonged exercise.

The scrotum is usually more dependent on the affected side than usual, with a fulness above the normal position of the testicle. On handling this fulness, it is found to be a soft mass of veins, feels as if it were a bag or bunch of worms, and in many cases the testicle is found to be smaller than the right and softer, with quite a flabby feel.

Complications.

The complications are many in number, and include haemorrhage, ulcer, thrombosis, phlebitis, pulmonary embolism, persistent eczema, oedema, and in varicocele - "neuralgia of the testis."

Haemorrhage. Fortunately, in my experience at any rate, this is a rare complication. I have only had one case, and that in a female. The opening, about one-eighth of an inch, was about 6" above the ankle, and before I reached her she had lost a good deal of blood. Luckily her friends had placed her on a bed, so that her leg was not in a dependent position, or she would have lost enough to imperil life.

A pad of lint, firm bandaging, rest in bed with the limb elevated, healed up the opening in a few days. I instructed her friends, if ever it happened again, to place a pad of clean rag over the opening and keep it pressed firmly on with the finger till I came. It burst again about two years after, and on my arrival I found her son standing with his finger on the pad over the wound. She had lost very little blood this time, and the same treatment closed it up in a few days. She died some years after with heart disease, but had no further rupture of her veins.

Ulcer. This is a very common complication of varicose veins, and is most often found on the lower and inner part of the leg. This is due to the free communication between the deep and superficial veins and also to its being the most dependent part of the leg. It is also frequently found on the inner and outer aspects of the ankle, below the malleoli.

In my experience, ulceration occurs oftener in the deep variety of varicose veins. A varicose ulcer is frequently painful and difficult to heal, sometimes requiring prolonged rest in bed before it closes. It is very apt to recur, a very slight knock or blow being sufficient to open it up. It may even open up without any external violence.

In the treatment of varicose ulcers, I have found rest in bed to be the first essential; keep the bowels open and give tonics. Locally cleanse the ulcer thoroughly with boric fomentations, until it has a clean healing surface. I now cut a piece

of boric lint to the exact shape of the wound, and small enough to lie inside the wound almost clear of the edges. Soak the lint in hot water, squeeze the surplus water out, place it carefully in the wound and cover with gutta-percha tissue, having it overlap about half an inch all round. Place a layer of wool over it, and bandage firmly from the toes to the knee. Change it once a day.

Barr has found the following modification of Unna's gelatine method of treating ulcers of the leg useful.

The Ulcer should first be cleaned with boric fomentations or with red lotion.

R _p Charcoal	18 parts	Gelatine	16 parts
Ferric Oxide	6 - -	Glycerine	20 - -
Boric Acid	6 - -	Water	50 - -

Soak gelatine in a portion of the glycerine and water for 12 hours; make paste with remainder. Mix together and heat on water-bath, stirring; pour into shallow vessel. A carbolic-resin bandage is wound tightly round the leg, covering the ulcer and extending a hand-breadth above and below. The mixture is then painted over the site of the ulcer and the whole bandaged over with an ordinary bandage. The paste is left on for a week at first. When the ulcer is healing well, the parts may be left for a fortnight.

Allan Jamieson and Cranston Low describe and endorse the method long used by Hecker for the treatment of varicose veins and ulcers.

For varicose veins the detailed directions are as follows:- The limb must be thoroughly cleansed (shaved and scrubbed with soap and hot water), mopped over with ether, and all the visible dilated veins painted over with ichthyol-collodion (10 per cent.), and then zinc jelly applied. This is made by pouring into a vessel heated over a water-bath, 40 parts of water, 10 parts powdered gelatin, and stirring until dissolved. To this are added 40 parts of glycerine, with 10 parts zinc oxide intimately mixed. When thoroughly mixed and melted, this is removed and cooled, and may be kept indefinitely in a closed jar. The limb is smeared over with the jelly, and closely and evenly bandaged with a double-headed, starched, muslin bandage, dipped in water and squeezed out. This bandage may remain undisturbed for weeks, providing there is not any offensive discharge from the ulcer underneath. When eczema or ulcers are present, the ulcer must be cleaned and covered with a thick layer of airol and cotton-wool, and then treated as above detailed.

Thrombosis. I have not had many cases to treat, and those have been mostly in females.

Bilateral Thrombosis is almost entirely confined to women, while thrombosis occurring in the left limb is more frequent in men than in women. Thrombosis in the right limb only is almost exclusively confined to males, and is mostly caused by slight accident.

(Bennett, Varicose Veins,
page 21.)

Phlebitis not infrequently occurs in the course of varicose veins. It is usually most marked in the superficial veins of the leg ^{or} ~~and~~ thigh, the saphenae and their tributaries. The veins become swollen and tender, the skin over them gets red, and at intervals there is a more or less hard tumefaction of the blood within them. In some cases there are few or no constitutional symptoms, and in others the whole system may be a good deal affected.

Pulmonary Embolism. If part of the clot or thrombus in the varicose vein be disturbed, or break loose, and mix with the current of blood, it may cause obstruction of small branches of the pulmonary artery, with consequent lobular pneumonia. But if a large clot be disturbed bodily, it may pass up through the vena cava to the right side of the heart and block up the pulmonary artery partially or entirely, producing sudden death.

Persistent OEdema is oftener found with the varicosity of the deeper veins, and, when of long standing, a troublesome eczema may form all over the leg from the knee to the ankle.

Varicocele may be complicated with neuralgia or hyperaesthesia of the testis. This may be brought on by long standing or prolonged exercise causing a feeling of weight or uneasiness in the part, and in extreme cases where the scrotum is very much relaxed, labouring men have found it a mechanical hindrance in their work.

Diagnosis.

Superficial varicose veins cannot easily be mistaken for any other trouble, as usually found. It is more difficult to diagnose the deep variety, but the characteristic aching pain which disappears with rest, and the slight all-round enlargement of the affected leg as compared with the other, also oedema and itching, will help one in the diagnosis.

The saccular dilatation of the saphena vein just below Poupart's ligament may be mistaken for a femoral hernia, but with care it can easily be differentiated. On lying down, they can both be made to disappear with slight pressure. On standing up, they both return again; but if, before standing up, the pressure is still maintained, the hernia will not reappear, but the saccular dilatation of the vein will appear as it gets filled up from below.

In regard to the diagnosis of varicocele, the pendulous droop of the scrotum, usually on the left side, the slight bulging above the testicle and the unmistakable feeling as of a bunch of worms makes the diagnosis sure.

Prognosis.

The prognosis in regard to the cure of varicose veins is not good, and there is always a danger of rupture, inflammation, or ulceration.

Very great relief can be given by operation

in some cases, but in the more severe cases no operation for cure can be performed.

Varicocele may be cured by operation.

Treatment.

The treatment of varicose veins may be Palliative or Radical.

Palliative treatment consists of measures adapted to prevent further enlargement and to induce contraction of the distended veins. This may be done by getting the system into good order by the use of purgatives, tonics, rest, and local support to the veins, also exercise, massage, electricity and baths.

The first essential of treatment of varix is to bring about a healthy condition of the secretions generally, above all regularity of the bowels. The purgatives need not be too powerful. Sulphur and cascara may be used, and calomel will benefit by stimulating the liver. The system may be strengthened by the administration of tonics, and if the varix is not severe, these methods may be all that is required. If there is much pain and oedema, it may be necessary to take complete rest in the recumbent position, or, if that cannot be obtained, to take short intervals -- half an hour or so -- of rest during the day, in the recumbent position, with limbs elevated. Tepid douching over the painful parts, and gentle friction with a well-oiled hand, may relieve the pain and oedema.

Exercise. Active exercise discreetly used is of great service in many cases, where there is no contra-indication, such as heart-disease. In many cases, complete rest to an active individual may bring on dyspepsia, disordered hepatic function, and constipation, and thus aggravate instead of helping the disease; whereas properly regulated exercise is good for the varicose limb. The exercise must vary in character, the object being to bring about successive alterations in tension in the various groups of veins by the action of the surrounding muscles, and to avoid as far as possible throwing a continuous strain on the same veins. Long standing and bicycle riding tend to produce varicosity, owing to the long-continued use of the same groups of muscles, and thus throw a continuous strain on the same bloodvessels. In the case of seamen and firemen at sea, on board a ship pitching and rolling, the strain on certain groups of muscles for long periods, necessary to enable them to maintain their equilibrium and do their ordinary duties at the same time, tends to the production of varicosity in a great number of them. On the other hand, mixed exercises such as walking and riding may arrest the progress of the disease, and if the walking is varied by the patient's going uphill and downhill, different groups of muscles are brought into play and the strain on the more distended veins is eased.

Ulcer, eczema, and largely distended veins, may alto-

gether negative exercise.

Oedema may be benefited by well regulated exercise. Exercise may be more beneficial in patients of advanced age than in younger people.

Mechanical Support may be worn at the same time and may be of benefit.

Massage may be of great use when the pain is too great to allow of exercise. It is not applicable to all cases and must be carefully used where there is a tendency to eczema, or where the swelling is very great, or in gouty and anaemic subjects, as thrombosis may be set up in the one and bruising in the other. Massage cannot be used where there is recent thrombus, or ulcers, abscesses, or very tender limbs.

Electricity may be combined with massage or voluntary exercise, or used independently in the earliest stages of the disease. The good from its use is questionable, but the crampy pain may be relieved in neurotic subjects.

Baths. Tepid baths may be of some use, but cold baths may set up thrombosis, so that, apart from the good to the general health, they may not be of much use.

Mechanical Appliances. These may be divided into two classes, viz., localised pressure and general compression of the affected part.

Local pressure may be applied to the following conditions:-

varix affecting single veins or localised collection of veins;

cystic dilatations, whether individual or isolated, or whether occurring in general varix;

in a highly sensitive state of the limb where general pressure cannot be used owing to the pain, or where stockings or bandages cannot be worn, owing to eczema or pruritus.

A cure by operation may be effected in some, and great improvement in other of these cases.

Local pressure may be applied with strips of adhesive plaster encircling the limb three-quarters of its circumference, the plaster being removed at night and re-applied in the morning. In some cases this method gives relief, but as a rule it is very objectionable, troublesome, uncleanly, and painful, and may produce pustules and eczema, while perspiration or wet may loosen the strapping.

Trusses and pads may be applied to cases where the varicosity is localised about the legs and ankles. A pad of soft leather fixed inside a tightly-fitting stocking suspended from the waist may be of great service in some cases.

A slightly padded band of wash-leather, made to lace on the opposite side of the limb, is also of use in some cases.

A well-fitting truss of vulcanite or boxwood may be used for a localised varix at the saphenous opening.

A knee-cap of wash-leather, well padded over the veins and made to lace at the opposite side, is of use for those cases about the knee.

General Support. Bandages, if properly applied and adjusted to the leg, are best and give the greatest measure of support. The ordinary cotton-net bandage, the woven elastic bandage, or the pure india-rubber bandage may be used. The advantage of the cotton-net bandage is that it allows the perspiration to get out. The woven elastic bandage is good while new, but it soon deteriorates and loses its elasticity. The pure rubber bandage is good, but it keeps in the natural moisture of the limb, and should never be worn without a close tight-fitting stocking underneath. The difficulty and disadvantage of bandages in the hands of laymen are that they may be carelessly applied, too tight at one part and slack at another part, so that they may do harm instead of good, by obstructing the flow of blood in the veins; and they take some little time to apply well and get the pressure uniform from the toes up. A bandage must not be tightly tied below the knee. Stockings, anklets, knee-caps, leg and thigh supports.

Where a stocking can be borne, it gives the most satisfactory form of support. It is easily applied, and, if properly fitted, there is no fear,

as in the case of a bandage, that it will be too tight in one place and too loose in another; but it also must not grip too tightly under the knee. The same may be said of anklets and knee-caps. In regard to the thigh, the difficulty is to retain the thigh-piece in position, but if it is woven in one piece with a body belt, the difficulty is got over. Supports may ~~all~~ be made ^{all} in one piece, or they may be made to be laced up; in this manner the pressure may be varied. When laced, they may be made of different kinds of material, such as wash-leather, buckskin or kid.

A shield or support may be made of soft felt, and adapted to the limb, and fixed with straps and buckles.

In seamen, ~~the~~ I find the only support they will wear is the kind they can put off and on easily, such as the anklet, stocking, knee-cap or thigh-piece. They will have nothing to do with bandages, as they must have some appliance which they can take off quickly when retiring, and in the same way can draw on rapidly and get up when called.

Varicocele. The only support of any use to seamen is the suspensory bandage, and I find they will rarely use that in the home trade. In hot climates, where the scrotum is relaxed and adheres to the thigh with perspiration,

and therefore causes discomfort and a mechanical hindrance, they wear it regularly, as they feel a decided benefit from it; but as soon as they come into colder latitudes they discard it.

Radical Treatment may be resorted to when palliative treatment is inefficient, impossible, or markedly inconvenient to the patient, or where the symptoms are annoying or danger is feared.

There are two methods of operation, the subcutaneous and the open.

The subcutaneous, which aims at obliterating the vein in several places by means of ligatures placed subcutaneously round the vein, is not often used now.

The open method is used in several ways.

(1) By making several incisions over the affected vein and ligaturing it.

(2) By making 6-8 or more openings between the thigh and the ankle, ligaturing the vein in two places at each incision and excising the part between -- about an inch or so.

(3) In suitable cases where the varix is localised, by dissecting out the whole of the dilated veins.

The operations (2) and (3) are the more generally practised now.

Trendelburg's Operation is based on the fact that, when the long saphenous vein is dilated, blood flows back into it from the femoral.

In this operation the saphenous vein is ligatured

just below Poupart's ligament, i. e., near where it traverses the saphenous opening.

Mayo's operation consists of making small incisions and pulling out and excising the piece of vein between.

Varicocele. The operation for varicocele is nearly always done by the open method.

The object of this operation is to excise an inch to an inch and a half of the dilated spermatic veins, and at the same time shorten the spermatic cord. In many cases of varicocele the spermatic cord is too long, and the testicle, in consequence, too dependent.

The subcutaneous method aims at cure by passing ligatures above and below the dilated veins and so causing their obliteration. This method is practically given up now.

In my opinion, the radical operation is very rarely required, except in cases where there is persistent discomfort and neuralgia of the testicle. In the cases which I have examined, none of them complained of any discomfort whatever, except that when in warm climates the relaxed scrotum was apt to get in the way, so that they regularly used the suspensory bandage there, discarding it as unnecessary as soon as they came home. They were all able-bodied men engaged in laborious duties, and none of them ever lost a day's work owing to his having

varicocele; so that in my opinion, with the exceptions I have stated, there is nothing more required for the treatment of varicocele than the use of a suspensory bandage.

When entering the public services, it is a compulsory rule to have the operation done. I must enter a protest against this, as there is always a certain amount of danger and risk from the operation. Among the many cases I have seen, in strong, healthy, young and middle-aged men, many of whom had spent years sailing in tropical waters, I never had one who had to lie up for one day for disablement due to varicocele.

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ON VARIX,
WITH SPECIAL REFERENCE TO
VARICOSE VEINS IN THE LOWER EXTREMITIES,
AND VARICOCELE,

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