



237651

مشخصات کلی برنامه

برگزار کننده: دانشگاه علوم پزشکی ارومیه

شیوه اجرا: وبینار

نوع برنامه: کنفرانس علمی یک روزه

عنوان برنامه: اصول مدیریت زخم و درمان های نوین

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*****	ناز آفرین	قاسم زاده	ندارم	دانشگاه علوم پزشکی ارومیه	[1949] اخلاق پزشکی دکترای
*****	آرزو	آذری	استادیار	دانشگاه علوم پزشکی ارومیه	[1984] علوم سلولی کاربردی دکترای
*****	سحر	مهرانفر	استادیار	دانشگاه علوم پزشکی ارومیه	[1510] پزشکی عمومی دکترای حرفه ای [1950] پزشکی مولکولی دکترای
*****	شیوا	قلی زاده قلعه عزیز	دانشیار	دانشگاه علوم پزشکی ارومیه	[1510] پزشکی عمومی دکترای حرفه ای [1950] پزشکی مولکولی دکترای
*****	رقيه	قربانی	استادیار	دانشگاه علوم پزشکی ارومیه	[1942] زیست فناوری پزشکی (بیوتکنولوژی پزشکی) دکترای
*****	شقایق	دودی	استادیار	دانشگاه علوم پزشکی ارومیه	[14134] زیست شناسی سلولی و مولکولی کارشناسی ارشد



بسمه تعالی

زخم های لنف ادم

دکتر شیوا قلی زاده

پزشک – متخصص پزشکی مولکولی (MD-Ph.D)

دانشیار و هیات علمی دانشگاه علوم پزشکی ارومیه

گروه علوم سلولی کاربردی دانشکده پزشکی

Patient Scenario (S.N.)



Overview:

- 60 y/o white female,
- No CHF, CKD, PAD or DVT
- 12 year history of chronic, progressive edema, recurrent venous leg ulcers, recurrent cellulitis with one hospitalization, development of massive medial knee lobes, slow progression to significant disability and limited mobility



What is Lymphedema?

Lymphedema is more common than you think

LYMPHEDEMA CAUSES

Primary lymphedema is caused by malformations of the lymphatic system present at birth (congenital), but symptoms may not appear until later in life. Primary lymphedema can be passed from parent to child (hereditary). Lymphedema is also classified as primary when no known cause can be identified.

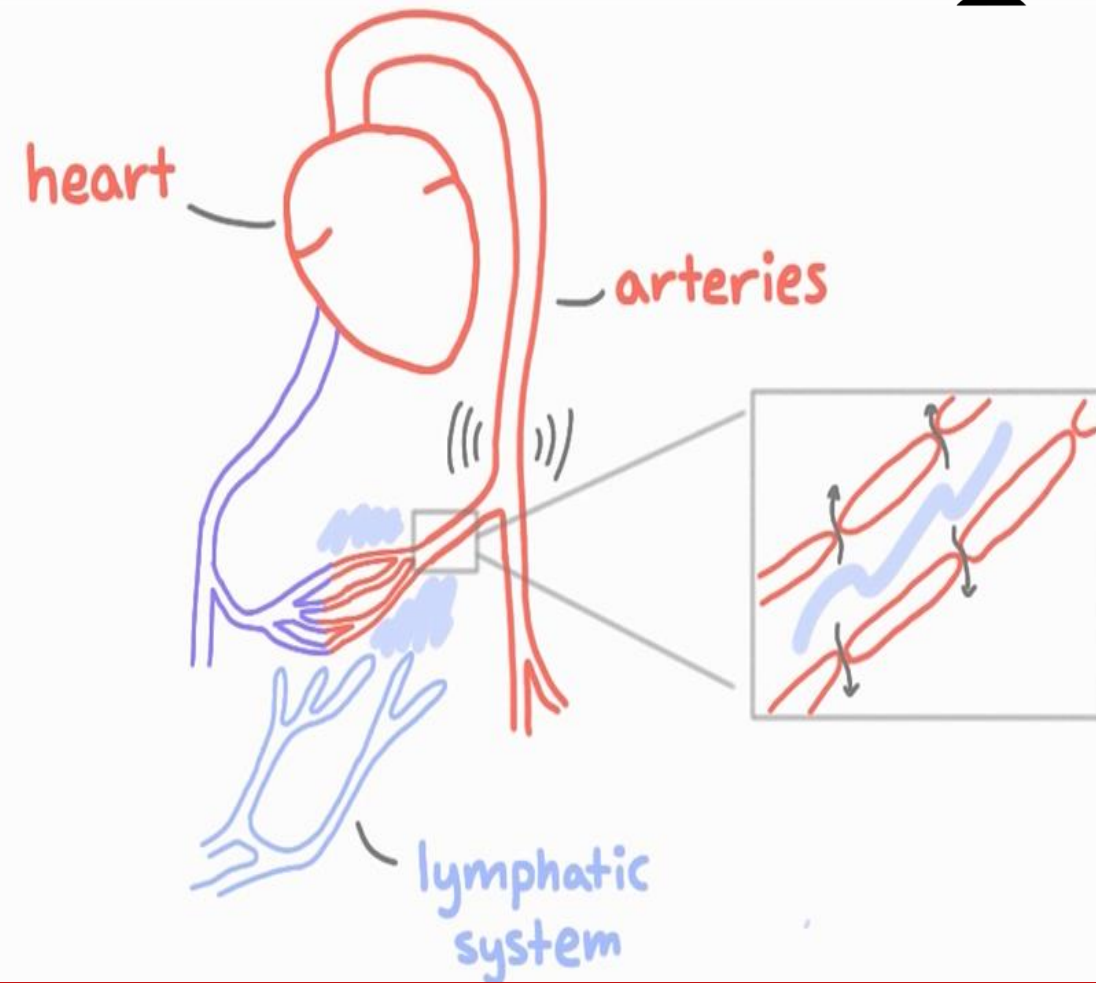
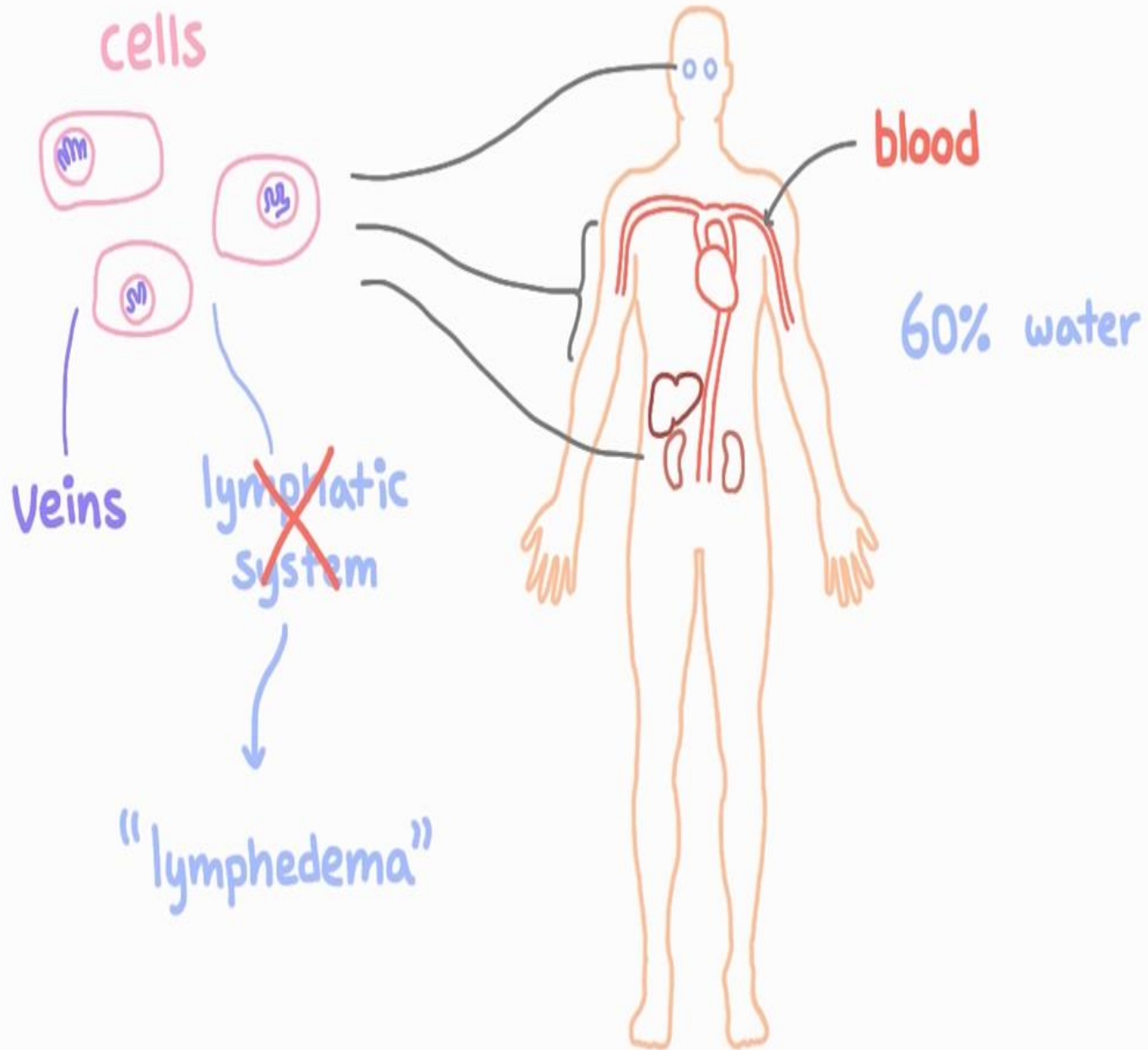
Secondary lymphedema is more common. It is the result of known damage or ongoing strain to the lymphatic system, such as:

- Chronic venous insufficiency (CVI)
- Cancer treatments (removal of lymph nodes and/or radiation therapy)
- Benign or malignant tumor growth
- Trauma

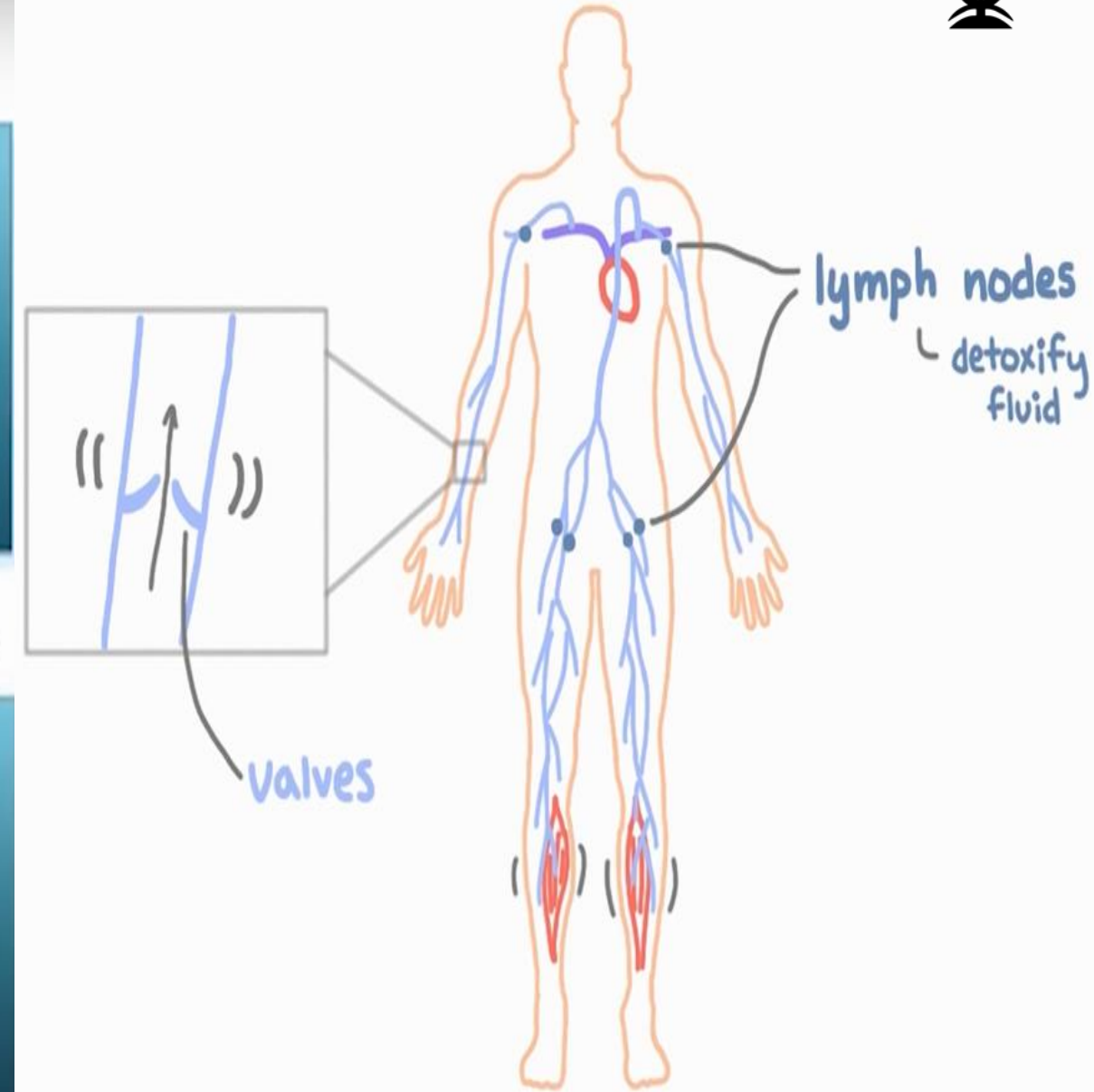
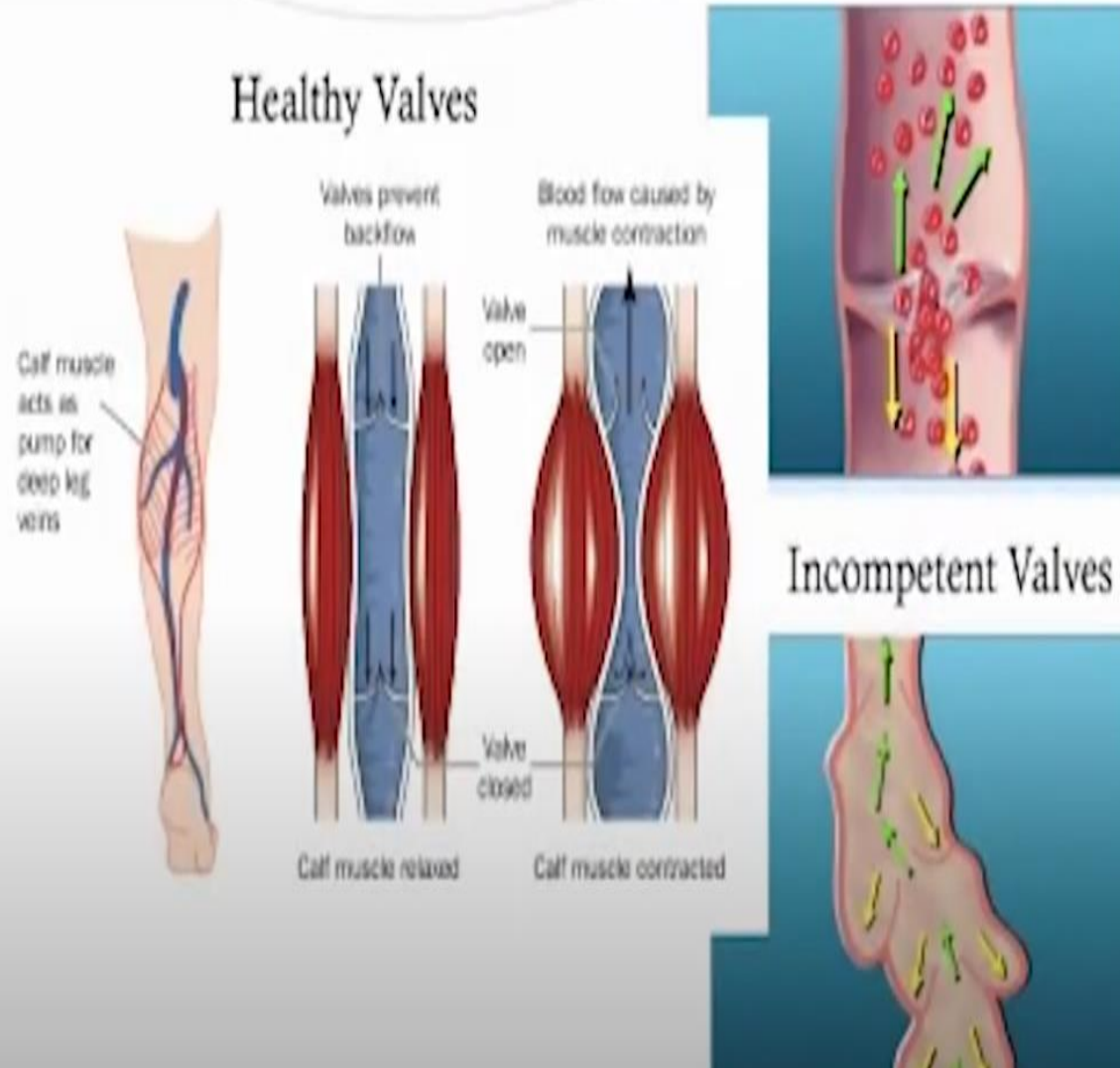
آشنایی با لنف ادم



- <https://www.youtube.com/watch?v=5Vw91mIKYjU>
- <https://www.tactilemedical.com/lymphedema-explained/>



Chronic Venous Insufficiency (CVI)



LYMPHEDEMA

* buildup of LYMPH *

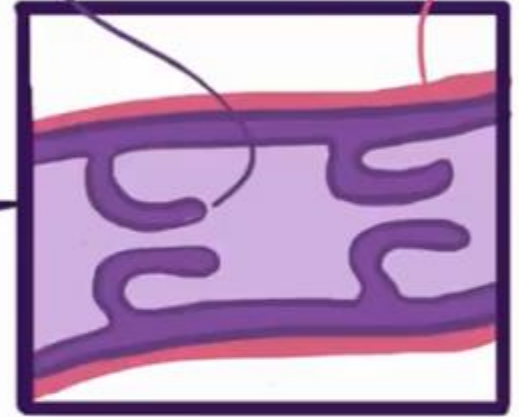
Afferent LYMPHATIC CAPILLARIES

- L throughout body (even BRAIN)
- L larger openings
 - L interstitial fluid
 - L proteins
 - L cellular debris
 - L bacteria

LYMPH

one-way valve
+

Smooth
muscles



DEOXYGENATED
blood
back to HEART



cells



closed-ended

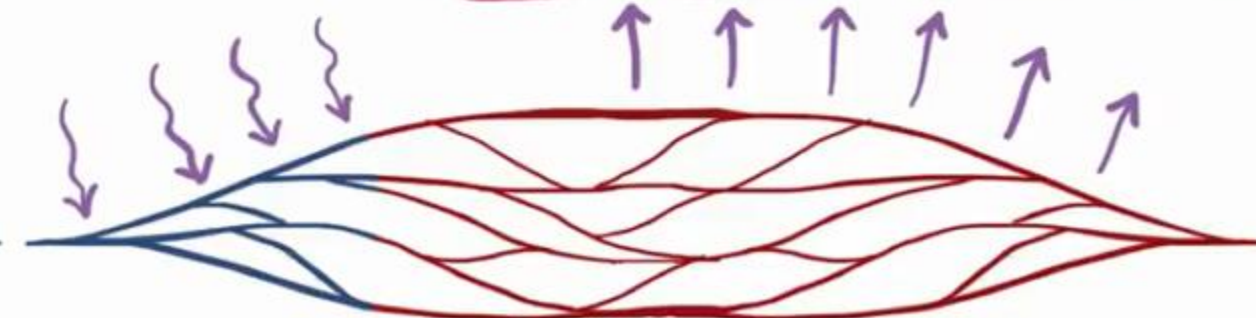
OXYGENATED
blood from
HEART

Arteriole

Artery



CAPILLARY BED



LYMPHEDEMA

* buildup of LYMPH *

↑↑ **FLUID** in interstitial space
↳ ↑ proteins & cellular debris

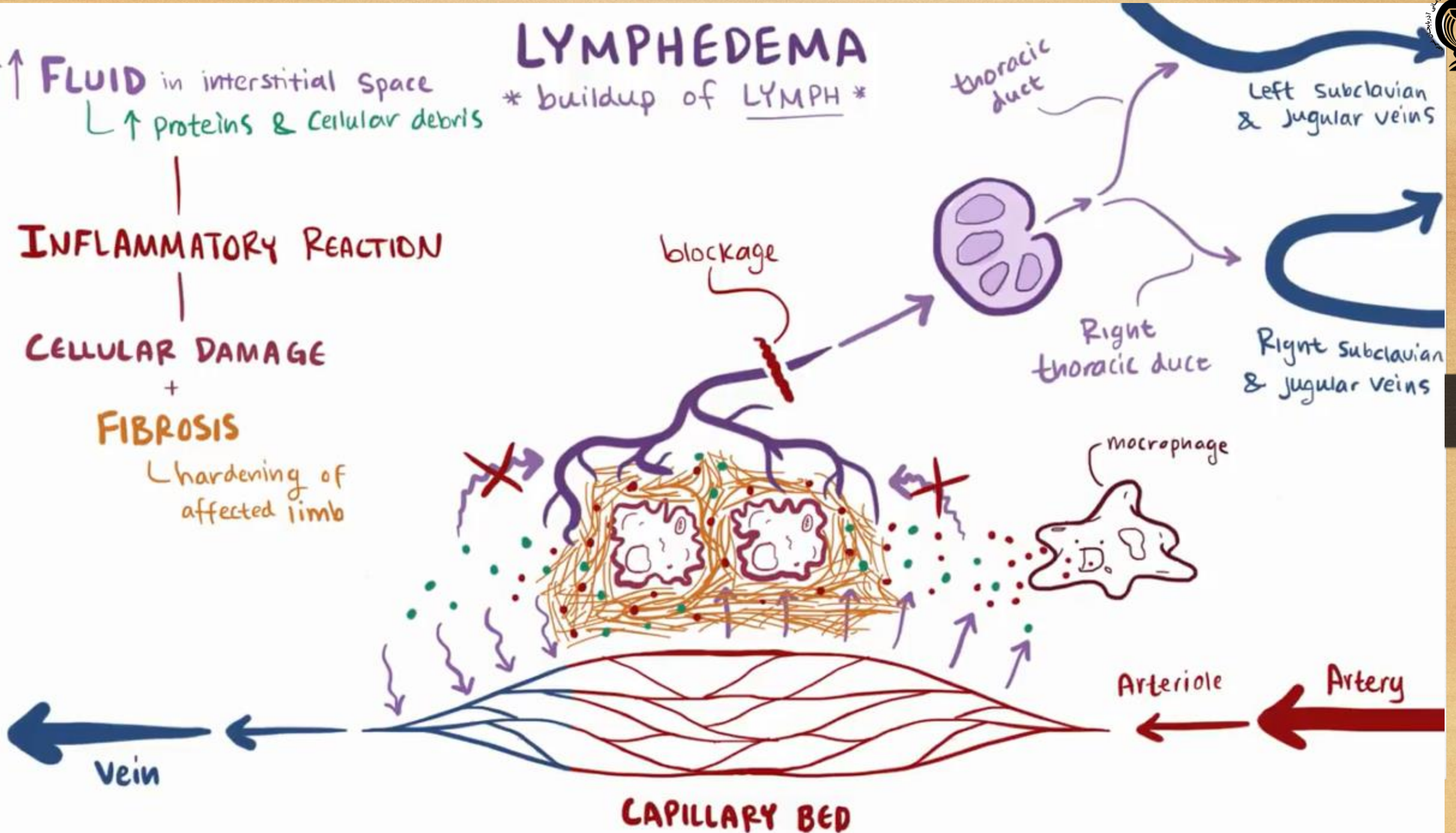
INFLAMMATORY REACTION

CELLULAR DAMAGE

+

FIBROSIS

↳ hardening of affected limb



LYMPHEDEMA

* buildup of LYMPH *

PRIMARY LYMPHEDEMA

* not caused by other disease

↳ usually **CONGENITAL**

- lymphatics don't develop right

↳ **LYMPHEDEMA PRAECOX**
DEVELOPS before age 35

↳ **LYMPHEDEMA TARDA**
DEVELOPS after age 35

↳ associated with **TURNER SYNDROME**

SECONDARY LYMPHEDEMA

GLOBALLY

↳ **FILARIASIS** ~ nematode infection

- *Wuchereria bancrofti*
- *Brugia malayi*
- *Brugia timori*

DEVELOPED NATIONS

↳ **CANCER MALIGNANCY**

- primary lymphoma
- metastatic tumor cells
- treatment



LYMPHEDEMA

PRIMARY: HAPPENS ALONE
SECONDARY: DUE to ANOTHER DISEASE

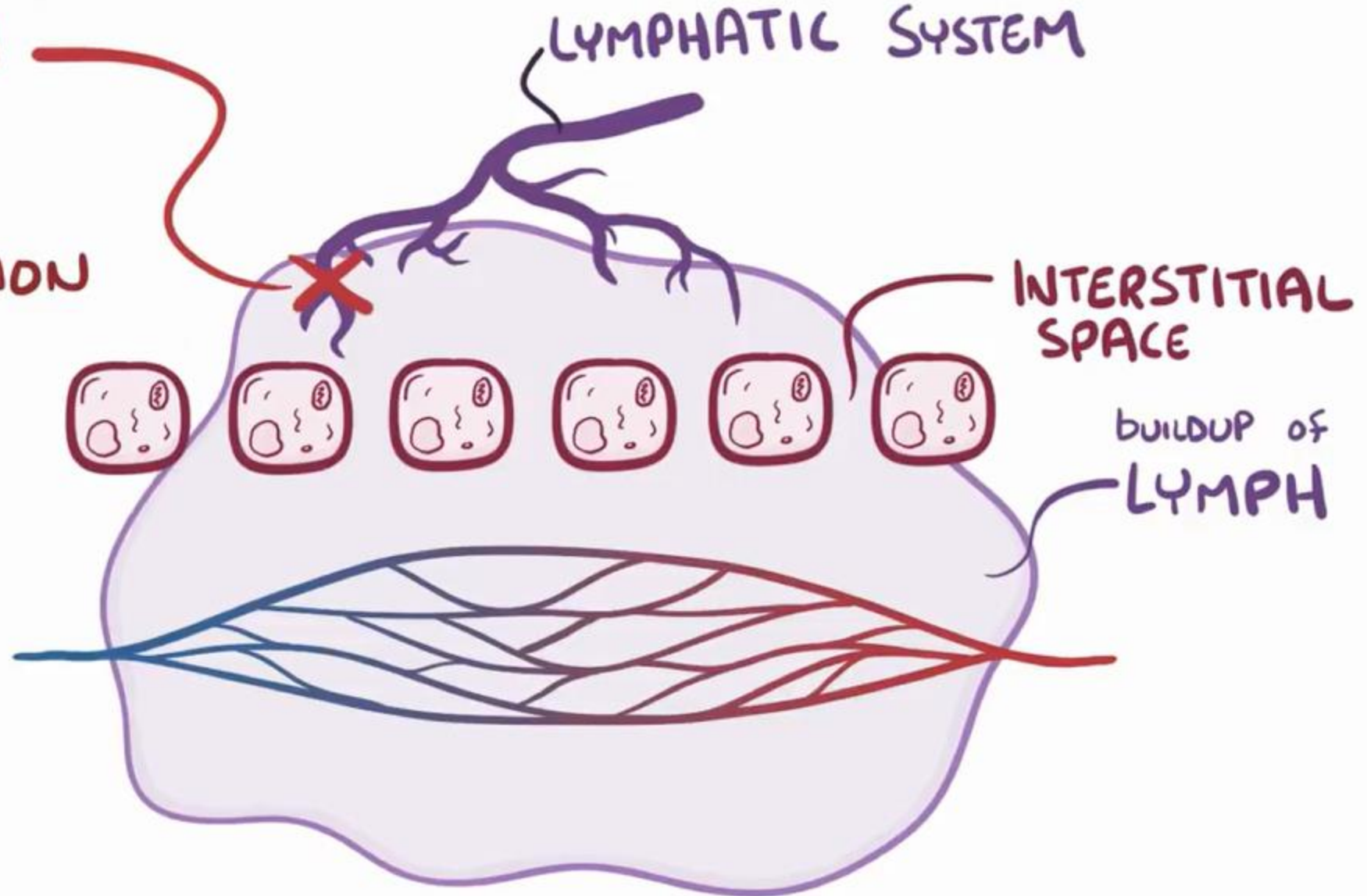
OBSTRUCTION



- * EDEMA
- * INFLAMMATION
- * FIBROSIS

TREATMENT

- L BANDAGES
- L MASSAGE
- L SURGERY



Phlebolymphe^odema= CVI + Lymphedema

Chronic CVI leading to
secondary lymphedema



Chronic lymphedema with
concurrent CVI (S.N.)



Lymphedema Signs and Symptoms

Lymphedema typically appears with the following signs and symptoms:

LIMB HEAVINESS

Limb heaviness is the most common early symptom of lymphedema

ACHING, FATIGUED LIMBS

Aching limbs or unusual and excessive pain/discomfort and fatigue in the limbs

PITTING EDEMA

Evident when the skin is depressed with your finger for a few seconds and the indentation does not immediately disappear

SWELLING (EDEMA)

Tightness of the skin and awareness that clothing, shoes and jewelry feel tighter in the affected extremity

DECREASED RANGE OF MOTION

Inability to move your joints and limbs to a normal degree

DECREASED FUNCTIONAL MOBILITY

Inability to stand, walk or move your body normally

FIBROSIS

Hardening or scarring of tissue in response to chronic inflammation

SKIN CHANGES

Redness/purplish discoloration, dryness, increased warmth

DECREASED MUSCLE STRENGTH

A feeling of muscle weakness that may lead to physical limitations

OPEN WOUNDS (VENOUS ULCERS)

A slow-to-heal sore on your leg caused by weak blood circulation in the limb

STEMMER SIGN

A thickened skin fold (when pinched at the base of the second toe or finger) that may be a clinical indicator of lymphedema

PAIN, DISCOMFORT, TIGHTNESS

Lymphedema is often accompanied by a feeling of pain, discomfort and tightness in the affected area

DYSPHAGIA

Difficulty swallowing

VOCAL CHANGES

Including difficulty speaking

DIFFICULTY BREATHING

Internal swelling of the larynx can make it difficult to breathe

STAGES OF LYMPHEDEMA

It is important to note that while the following lymphedema stages are commonly recognized, there may be differing levels of severity within each stage.

Stage 0

Swelling may not be apparent despite impaired lymphatic function. Symptoms at this stage may include heaviness, tightness or tingling.

Stage 1

With rest and/or elevation, the swollen limb returns to normal size. Pitting may be present. (When pressure is applied to the skin of the swollen area and released an indentation remains.)

Stage 2

The tissue can present with pitting, but often in this stage more significant skin changes are present with development of fibrosis tissue; the tissue may have a spongy feel.

Stage 3

The tissue at this stage can be hard (fibrotic). The swelling may be largely irreversible and the limb can be very large and swollen. Infections are possible at any stage of lymphedema; however, the risk increases as the stages progress.

Treatment Synergies: Lymphorrhea

- Lymphorrhea (leakage of lymph fluid on the skin) and wound drainage both contain enzymes that denude the skin, causing painful, shallow wounds



Photo: ILF BEST PRACTICE FOR THE
MANAGEMENT OF LYMPHOEDEMA

Treatment Pearls: Lymphorrhea

- Superabsorbent dressings - have “diaper technology” that can absorb & trap very large amounts of fluid
- Vertical and lateral wicking move fluid away from the surface of the skin and distribute it evenly throughout the dressing, keeping the skin dry
- Superabsorbers work well under compression therapy



Photo: ILF BEST PRACTICE FOR THE MANAGEMENT OF LYMPHOEDEMA

Treatment Synergies: Chronic Wounds

- Lymphedema can lead to chronic wounds and chronic wounds can lead to lymphedema
- Lymphedema and chronic wounds need to be treated concurrently for optimal care



Treatment Pearls: Chronic Wounds

- ◆ Add modified CDT, including MLD and compression, whenever Stemmer's Test is positive
- ◆ Inelastic compression with chipped foam can help soften thickened, fibrotic tissue associated with phlebolymphedema
- ◆ CDT can help optimize wound healing potential and reduce risks of recurrent cellulitis & infections

