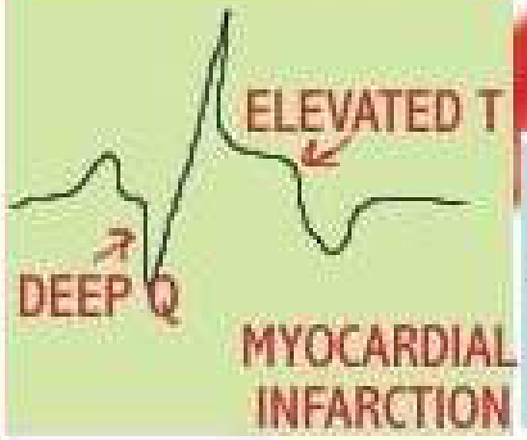
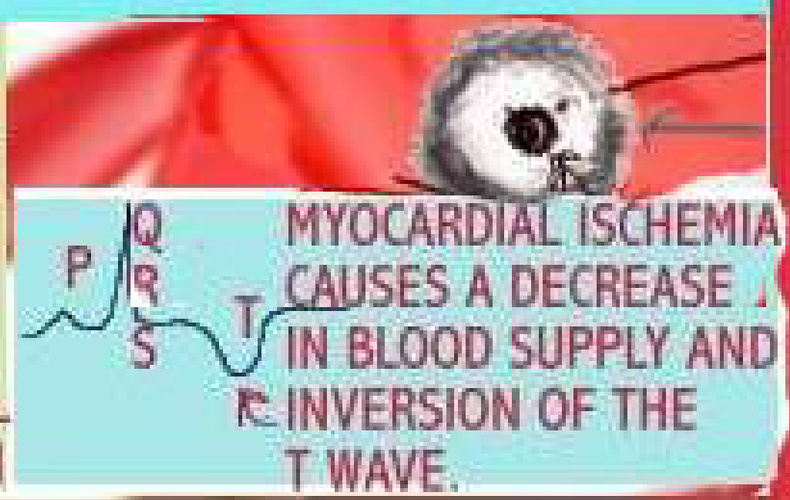
CHAPTER 11

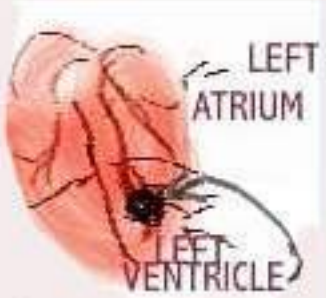
PART 1

FOR INFORMATION ON EKG INTERPRETATION, PLEASE CHECK OUT:
EKG SERIES-WHAT IS WRONG WITH THAT EKG
WWW.DEARNURSES.COM





CHAPTER 11



PART-1

A SPECIAL EKG SERIES ON:
WHERE IS THAT MYOCARDIAL INFARCTION
(includes the 12 lead EKG and MI locations)

PART-2

ATRIAL FIBRILLATION- its association with stroke symptoms.

LETHAL RHYTHMS:
Ventricular Fibrillation, Ventricular Tachycardia, Third degree AV block, PEA and Asystole.

WHAT IS A CABG?

WHERE IS THAT MYOCARDIAL INFARCTION

LEARNING OBJECTIVES

1.IDENTIFY THE HEART'S MAIN BLOOD SUPPLY.

2. RECOGNIZE MYOCARDIAL ISCHEMIA VS. INFARCTION.

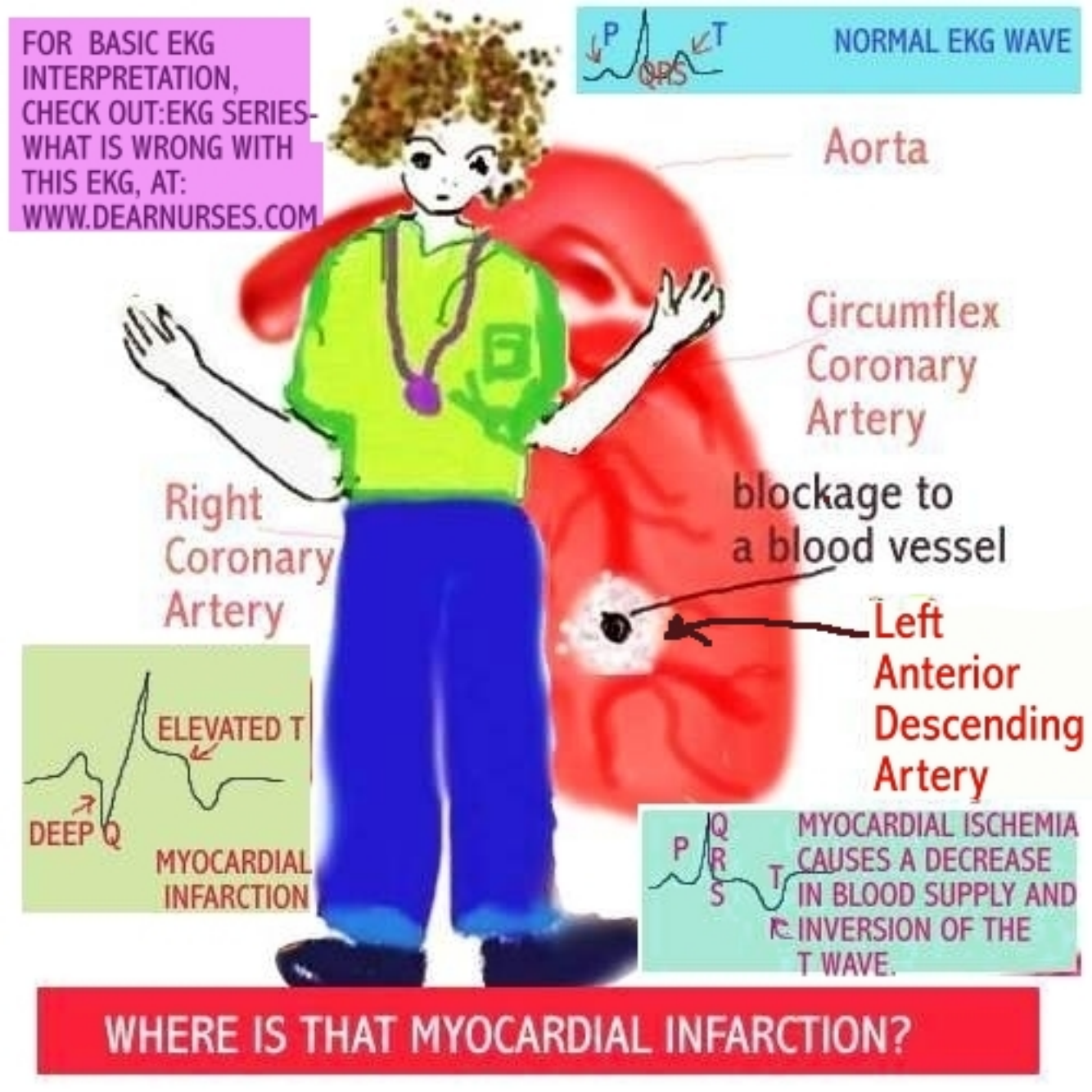
3. DISCUSS 12 LEAD EKG AND LEAD PLACEMENT.

4. IDENTIFY THE LOCATION OF THE MYOCARDIAL INFARCTION ON THE EKG.

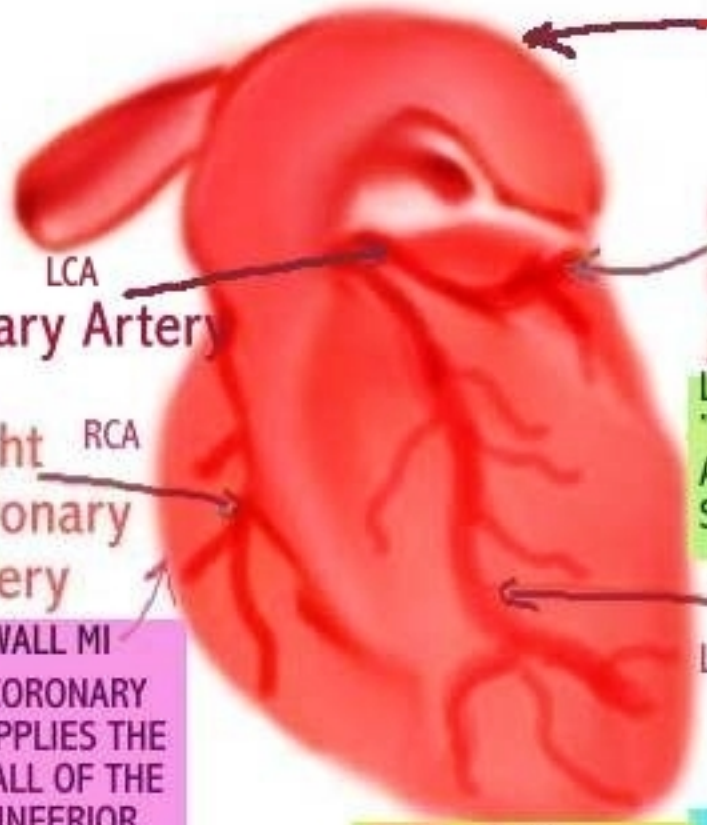
5.THE CLINICAL PICTURE OF A PATIENT IN CARDIOGENIC SHOCK.

6. RELATE THE MANAGEMENT OF A PATIENT WITH CHEST PAIN.

FOR BASIC EKG INTERPRETATION, CHECK OUT:EKG SERIES- WHAT IS WRONG WITH THIS EKG, AT: WWW.DEARNURSES.COM


FOR BASIC EKG INTERPRETATION, CHECK OUT:EKG SERIES- WHAT IS WRONG WITH THIS EKG, AT: WWW.DEARNURSES.COM
P
T
QRS
NORMAL EKG WAVE
Aorta
Circumflex Coronary Artery
Right Coronary Artery
blockage to a blood vessel
Left Anterior Descending Artery
ELEVATED T
DEEP Q
MYOCARDIAL INFARCTION
P
Q
R
S
T
MYOCARDIAL ISCHEMIA CAUSES A DECREASE IN BLOOD SUPPLY AND INVERSION OF THE T WAVE.
WHERE IS THAT MYOCARDIAL INFARCTION?

HEART'S MAIN BLOOD SUPPLY



Aorta

Left Coronary Artery LCA

Circumflex Coronary Artery

LATERAL WALL MI-
'THE CIRCUMFLEX ARTERY SUPPLIES THE SIDE (LATERAL) OF THE HEART

Right Coronary Artery RCA

Left Anterior Descending Artery LAD

INFERIOR WALL MI

RCA (RIGHT CORONARY ARTERY) SUPPLIES THE INFERIOR WALL OF THE HEART. THE INFERIOR WALL RESTS ON THE DIAPHRAGM.

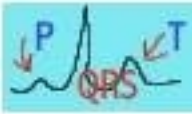
LEFT VENTRICLE

RECEIVES ITS BLOOD SUPPLY FROM THE LAD. CARDIOGENIC SHOCK MAY RESULT FROM PUMP FAILURE.

ANTERIOR WALL MI

THE HEART MUSCLE AROUND THE LEFT ANTERIOR DESCENDING (LAD) MAY DIE OR BE DEPRIVED OF OXYGEN, RESULTING IN PUMP FAILURE.

MYOCARDIAL ISCHEMIA CAUSES A DECREASE IN BLOOD SUPPLY AND INVERSION OF THE T WAVE.



NORMAL EKG WAVE

MYOCARDIAL INFARCTION

A DEEP Q WAVE ON THE EKG IS SEEN IN PATIENTS WITH A PREVIOUS MI.

Aorta

Circumflex Coronary Artery

Right Coronary Artery

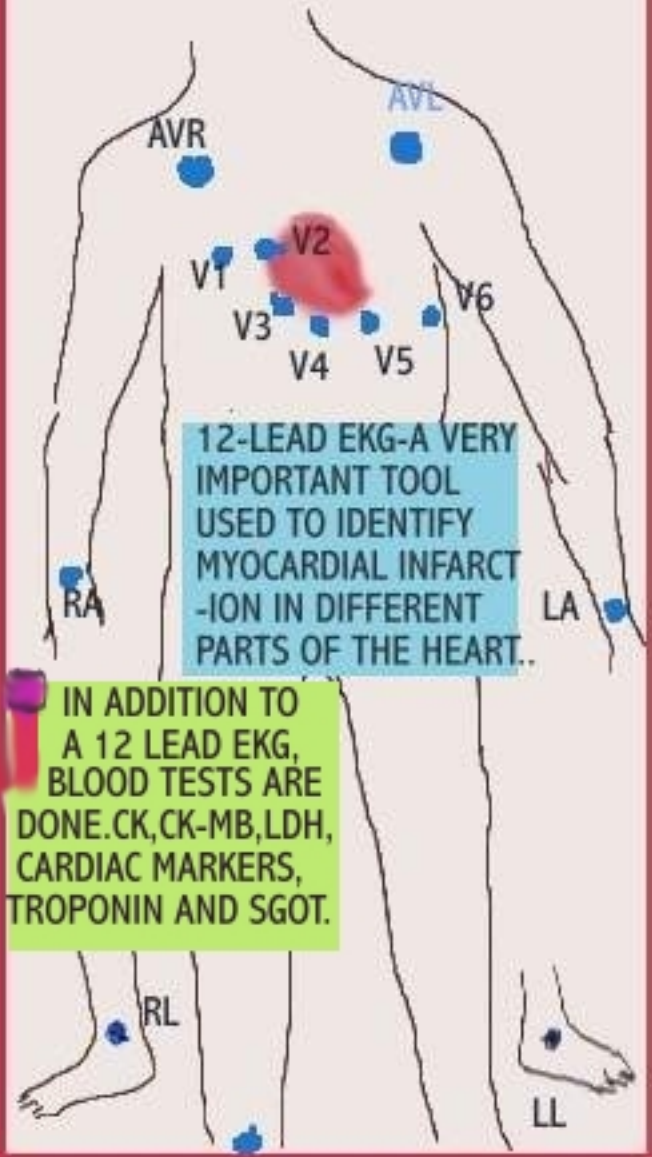
blockage to a blood vessel

Left Anterior Descending Artery

WHEN A MYOCARDIAL INFARCTION OCCURS, THE AREA OF THE HEART (CLOSE TO THE INFARCT) DIES DUE TO NO BLOOD SUPPLY. DEATH OF HEART MUSCLE MEANS THERE IS NO BLOOD SUPPLY TO THAT PART OF THE HEART. SYMPTOMS SUCH AS SEVERE CHEST PAIN, SHORTNESS OF BREATH AND LETHAL CARDIAC RHYTHMS MAY RESULT.

MYOCARDIAL ISCHEMIA CAUSES A DECREASE IN OXYGEN TO THE PART OF THE HEART THAT IS DEPRIVED OF OXYGEN. THIS CONDITION IS CONSIDERED TO BE REVERSIBLE IF TREATED QUICKLY. CHEST PAIN, SHORTNESS OF BREATH, ANXIETY AND LETHAL CARDIAC RHYTHMS MAY ALSO RESULT.

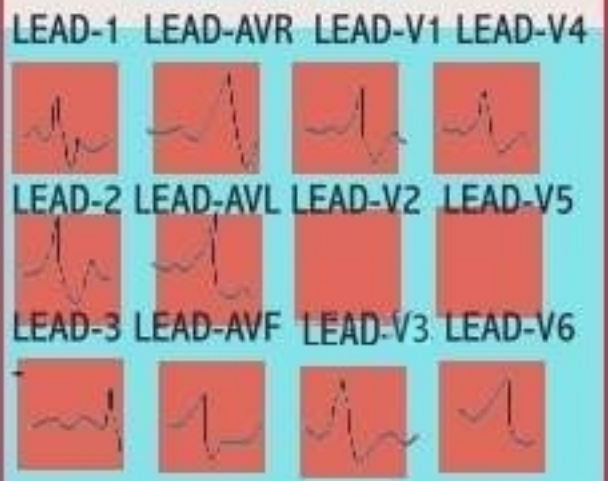
LEAD PLACEMENT



12-LEAD EKG-A VERY IMPORTANT TOOL USED TO IDENTIFY MYOCARDIAL INFARCT -ION IN DIFFERENT PARTS OF THE HEART..

IN ADDITION TO A 12 LEAD EKG, BLOOD TESTS ARE DONE.CK,CK-MB,LDH, CARDIAC MARKERS, TROPONIN AND SGOT.

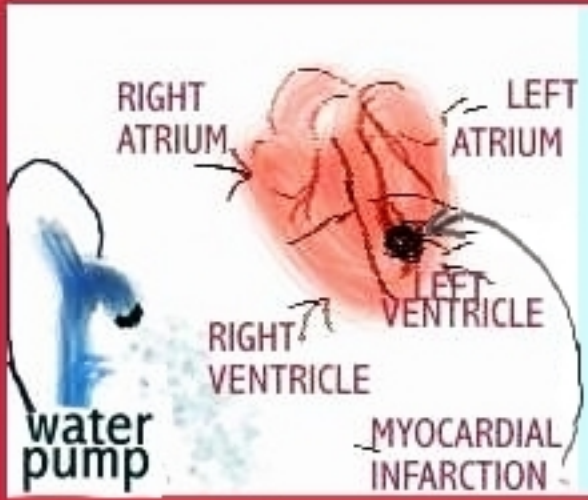
12LEAD EKG



SAMPLE OF A MACHINE USED FOR DOING EKGS

WHEN A 12 LEAD EKG IS DONE,THE ELECTRICAL ACTIVITY OF THE HEART IS TAKEN FROM 12 DIFFERENT ANGLES, JUST LIKE A CAMERA IS USED TO TAKE PICTURES FROM DIFFERENT VIEWS.

READING THE EKG, IS LIKE TAKING A 'MENTAL SNAP SHOT' OF THE HEART.



ANTEROSEPTAL MYOCARDIAL INFARCTION CAN BE SEEN IN LEADS :V1,V2 AND V3

HELPFUL HINT:
"MENTAL SNAP SHOT"

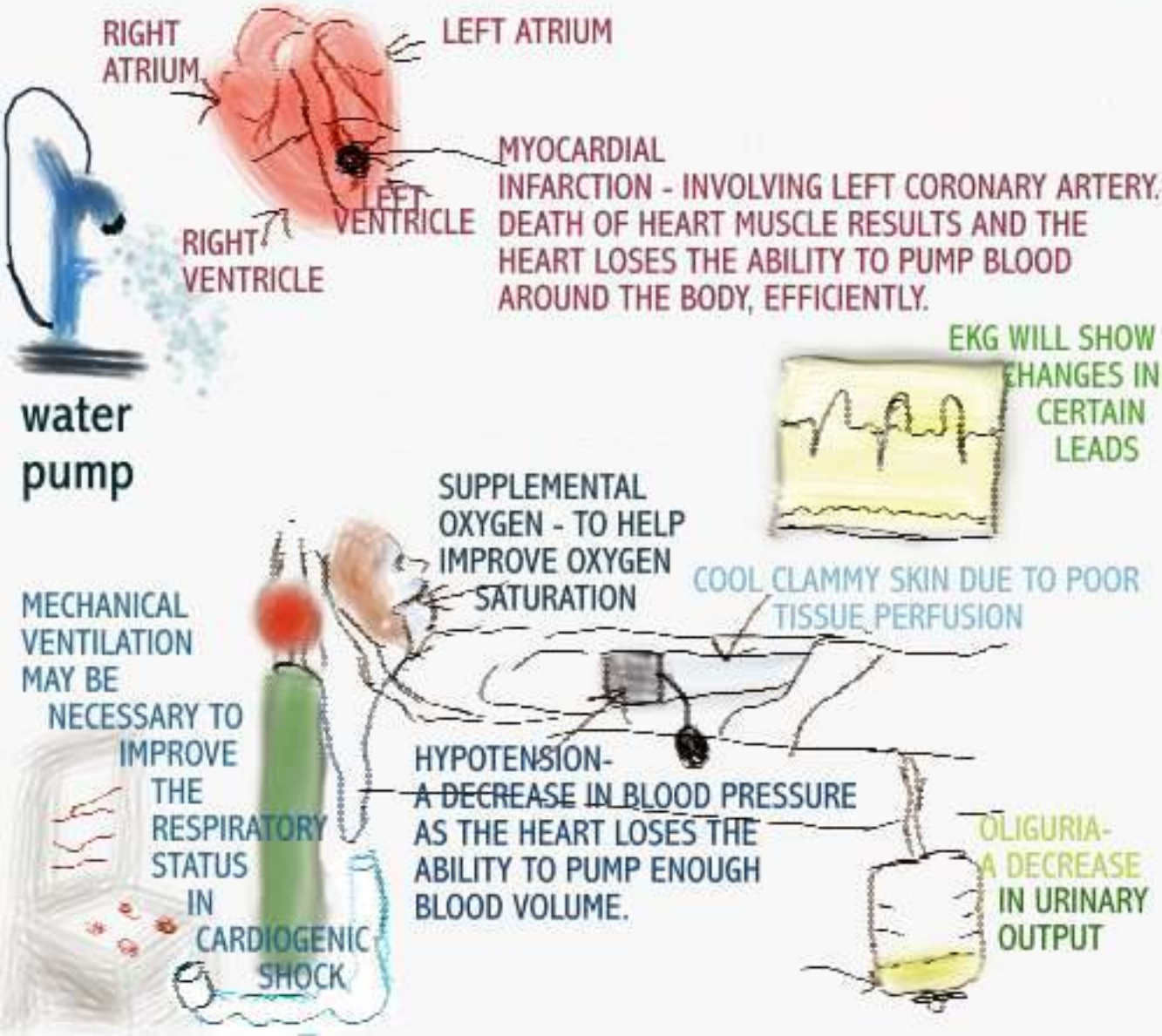
THIS PATIENT IS IN CARDIOGENIC SHOCK.SHE IS 46 YEARS OLD AND HAD A PREVIOUS MI.

ANTERIOR MI CAN BE DETECTED IN LEADS V2,V3 AND V4. A DECREASE IN BLOOD FLOW TO THE LAD(LEFT ANTERIOR DESCENDING)ARTERY WILL RESULT IN DAMAGE TO THE MYO-CARDIUM OF THE LEFT VENTRICLE. CARDIOGENIC SHOCK OR CONGESTIVE HEART FAILURE MAY RESULT. BOTH CONDITIONS WILL REQUIRE CRITICAL CARE MANAGEMENT.

FOR A CASE STUDY ON CARDIOGENIC SHOCK, GO TO :
WWW.DEARNURSES.COM

SIMPLIFYING CARDIOGENIC SHOCK

THE CLINICAL PICTURE



MOCARDIAL INFARCTION- INFERIOR WALL

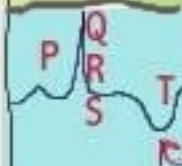
MR. N IS COMPLAINING OF SEVERE HEART-BURN. HIS NURSE HAS ALREADY GIVEN HIM THE MEDICATIONS THAT HE HAS ORDERED. 2 HOURS LATER, THERE IS NO IMPROVEMENT.

HELPFUL HINT: "MENTAL SNAP SHOT" CHANGES ARE IN LEADS - 2,3 AND AVF. THE HEART DAMAGE SEEN IN THESE LEADS IS SUGGESTIVE OF AN INFERIOR WALL MI.

THE LOCATION OF THE HEART IS IN THE CHEST CAVITY. THE INFERIOR WALL RESTS ON THE DIAPHRAGM.

INJURY TO THE MYOCARDIUM (HEART MUSCLE) MAY RESULT IN SYMPTOMS SUCH AS HEARTBURN THAT IS NOT RELIEVED BY ANTACIDS.

INFERIOR MI IS ALSO REFERRED TO AS A DIAPHRAGM-ATIC MI.



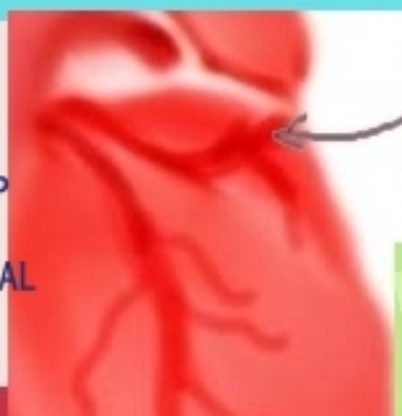
MYOCARDIAL ISCHEMIA CAUSES A DECREASE IN BLOOD SUPPLY AND INVERSION OF THE T WAVE.

Meet Ann who likes an ice cream cone at bedtime. She is obese and refuses to make lifestyle changes.

CIRCUM-FLEX

ANN HAS BEEN HAVING CHEST PAIN ON AND OFF FOR THE LAST TWO WEEKS. SHE WILL SOON LEARN THAT SHE HAS A LATERAL WALL MI.

"MENTAL SNAP SHOT" ANTEROLATERAL MI LEADS:1, AVL ,V4,V5,V6 AND V6.



LATERAL WALL MI- THE CIRCUMFLEX ARTERY SUPPLIES THE SIDE OF THE HEART.

"MENTAL SNAP SHOT" LATERAL MI-LEADS: 1 AND AVL

ANTEROLATERAL MI-LEADS: 1,AVL.V4,V5 AND V6.

I need all of this paperwork completed today, even if you are late going home.

My chest really hurts.

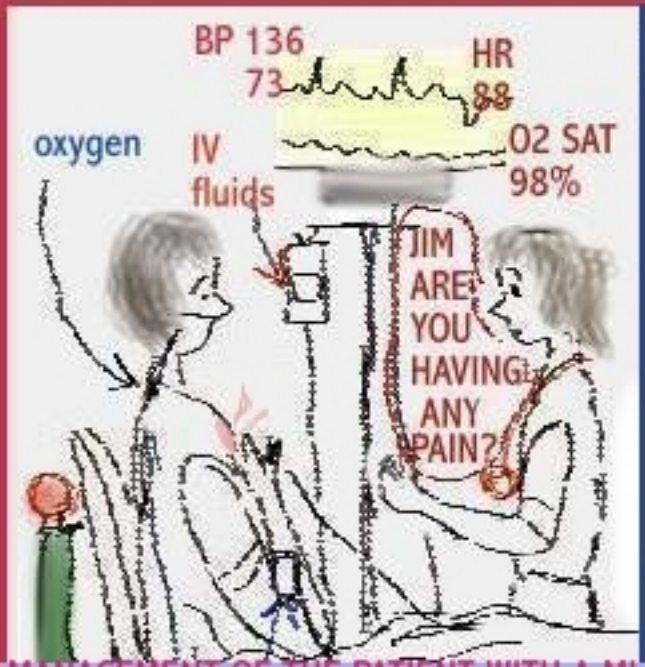
Mrs.K has a very demanding boss. He cares little about the unreasonable demands he makes on her. The stress is causing her chest pain.

IDENTIFYING THE POSTERIOR MI

POSTERIOR MI

THIS TYPE OF MI IS HARD TO DETECT BECAUSE OF ITS LOCATION AT THE BACK OF THE HEART. COMMONLY LINKED TO THE INFERIOR WALL MI, A MIRROR IMAGE IS USED.

A QUICK WAY TO CONCLUDE POSTERIOR WALL MI, IS TO LOOK FOR EKG CHANGES IN INFERIOR WALL MI LEADS. THEN TURN THE EKG OVER AND HOLD IT TO THE LIGHT. RECIPROCAL CHANGES WILL BE NOTED. T WAVE ELEVATION ON THE FRONT SIDE, WILL LOOK LIKE T WAVE INVERSION ON THE BACK.



MANAGEMENT OF THE PATIENT WITH A MI IS DONE IN A CRITICAL CARE SETTING.

A VENTILATED PATIENT MAY EXPERIENCE CHEST PAIN AND A MI. TELL-TALE SIGNS OF SOMETHING BEING WRONG, COULD BE NOTED BY SIGNS SUCH AS ELEVATED HR, BP, AGITATION AND EKG FINDINGS.

HELPFUL HINTS:
WHEN MANAGING A PATIENT WHO HAS CHEST PAIN OR ANY CARDIAC EVENT,
- ASSESS AND DOCUMENT CHEST PAIN (CHARACTER AND DURATION) USE PAIN SCALE
- INTERVENTION AS INDICATED BY MD - O2, NTG, ASA AND MORPHINE.
- EVEN IF YOU ARE NOT VERY GOOD AT READING EKGS, FAMILIARIZE YOURSELF WITH THE MOST IMPORTANT LEADS TO LOOK AT, FOR EKG CHANGES.

PAIN ASSESSMENT

HOW IS YOUR PAIN ON A SCALE OF 1-10?

NUMERICAL RATING SCALE