



12 LEAD EKG



Escambia County, Florida - ALS/BLS Medical Protocol

Indications

The following is an incomplete list of patient presentations in which a 12 Lead ECG is required:

1. All chest pain, including blunt trauma to the chest.
2. All cardiac dysrhythmias, including:
 - a. Heart rate greater than 150/min.
 - b. Heart rate less than 50/min.
3. Epigastric pain, unless evidence of G.I. bleeding.
4. Thoracic back pain without trauma.
5. Diaphoresis not explained by environment or fever.
6. Sudden onset of shortness of breath with clear lung sounds.
7. Syncope without seizure or obvious blood loss.
8. Patient with PVC's unchanged by oxygen and/or greater than 6/min.
9. CHF/Pulmonary edema.
10. Tricyclic anti-depressant overdose.
11. All overdoses with abnormal rhythms.

Cautions


1. Treatment of life threatening problems (e.g. A, B, C's), dysrhythmia and relief of chest pain should be initiated prior to obtaining a 12 Lead ECG.



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2. Obtaining a 12 Lead ECG should not delay transport of critically ill patients.

12 Lead ECG Electrode Placement

The following describes the placement of all 10 electrodes and the order in which they should be placed:

1. RA - right arm, upper arm or upper chest near the shoulder.
2. LA - left arm, upper arm or upper chest near the shoulder.
3. RL - right leg or lower abdominal quadrant near the hip.
4. LL - upper leg or lower abdominal quadrant near the hip
5. V1 - 4th intercostal space, immediately to the right of the sternum.
6. V2 - 4th intercostal space, immediately to the left of the sternum.
7. V3 - Placed between V2 and V4.
8. V4 - 5th intercostal space in the midclavicular line
(Note: V4 must be placed prior to V3)
9. V5 - 5th intercostal space in the anterior axillary line.
10. V6 - 5th intercostal space in the mid axillary line.

The anterior axillary line can be found by making an imaginary down from the fold formed where the arm meets the chest.

The mid axillary line divides to body into anterior and posterior halves. It can be identified by dropping an imaginary line from the mid armpit down.


The correct placement of the precordial electrodes is dependent on the accuracy of finding the fourth intercostal space. This can be found by identifying the sternal ridge



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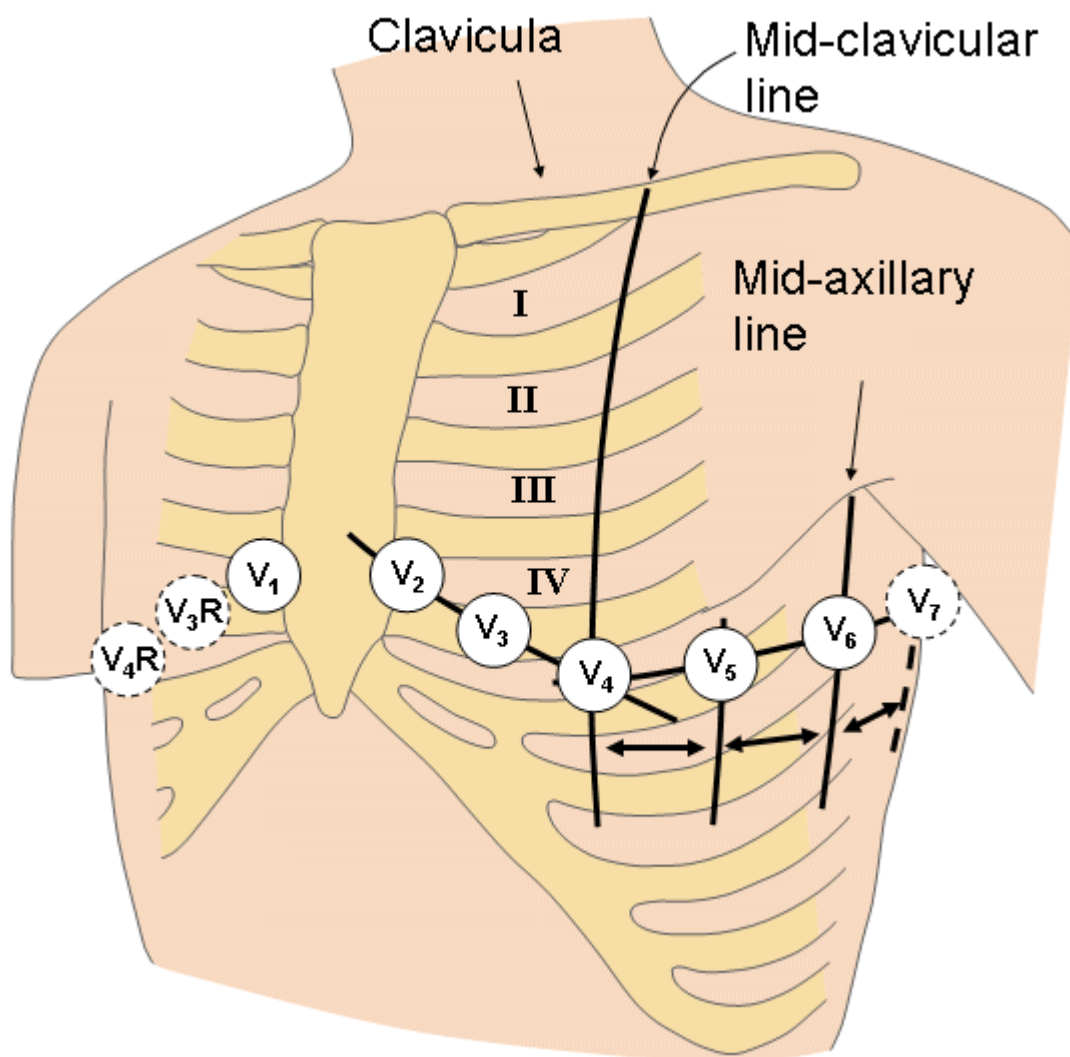


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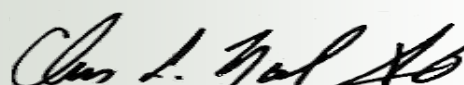
(Angle of Louis). This is found on the upper third of the sternum and described as where the manubrium of the sternum meets the sternal body (see diagram). The second rib joins the sternum at the level of the sternal ridge. Therefore, the space below the sternal ridge is the second intercostal space. Using moderate finger pressure and counting down from this space, the fourth intercostal space is easily found.



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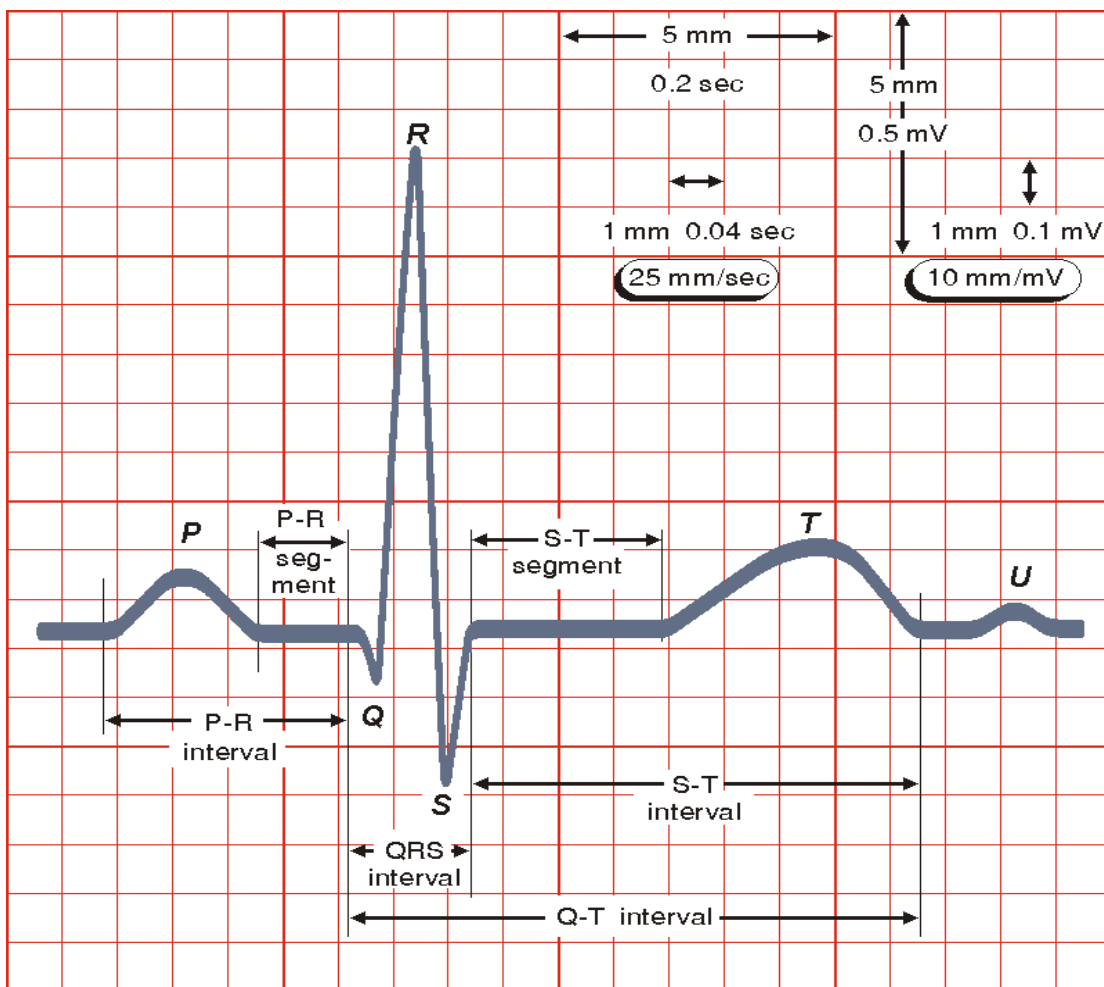

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Transmissions to Hospitals

After completing a 12 lead EKG you must transmit a copy to the receiving hospital (if hospital capable of receiving). This applies to normal and abnormal EKG's.

The current procedure.

1. After 12 lead EKG is done and patient is still connected to monitor.
2. Push transmit button on front of monitor.
3. This will bring up the screen for data transmissions.
4. Select data.
5. Select site (example: SHH, WFH, BH).
6. Select report (12 Lead EKG).
7. Select send. (Make sure patients name is entered in monitor before sending strip.)
8. After transmission is complete the monitor will print out a strip.
9. Read the strip to make sure transmission was complete.
10. In radio report to hospital make sure you notify them that you transmitted a 12 lead EKG.

Transmissions to Hospital after monitor has been turned off


1. Turn Monitor on.
2. Select options.
3. Select archives.



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4. Select yes to close this record.
5. Select send data.
6. Select the patient record you want to send (the records are date/time coded or the patient name will appear if entered).
7. Select 12 Lead EKG record.
8. Select site (example: SHH, WFH, BH).
9. Select send.
10. Monitor will print out after transmission is complete (read strip to ensure transmission complete).
11. Turn monitor off to exit archives.

Notes:

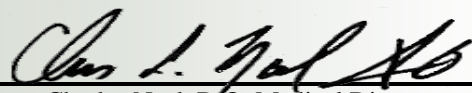
- Modems and monitors are not numbered alike. Any modem can be used with any monitor. If a monitor is removed from a unit, the modem and all components of the monitor (B/P and pulse ox) must be removed together.
- Patient name and incident number should be entered prior to transmission.



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