Chest Pain Review

CHEST PAIN by Maggie Chin	History clues	Exam	EKG	Labs	Radiology (signs & tests done)
Acute Coronary Syndromes	Substernal pressure with radiation to arms, neck, jaw, dyspnea, diaphoresis; occurs with exertion. Duration usually over 20 minute	Diabetics atypical presentation with only dyspnea or epigastric pain.	ST elevation or depression, flattened or inverted T waves	TNI Troponin	
Pulmonary Embolism	Virchow's triad: Venous stasis, hypercoagulable state, injury to vessel wall	Dyspnea, chest pain with breathing, tachypnea Radiology: In relatively uncommon situations, radiologic findings on chest X-ray such as decreased vascular markings distal to engorged arteries (Westermark's sign) or a wedge-shaped pleural based infiltrate (Hampton's hump) may lead to the diagnosis of PE.	Normal in 70%; sinus tachy, nonspecific ST and T wave changes Right strain Tachycardia S1Q3T3 $S1Q_3T_3$	ABG- resp alkalosis d/t hyperventilation; d-dimer: The negative predictive value of d-dimer testing was 99.5 percent in the low-probability group.	Spiral CT scan, CXR (Westermark's- triad: vessel cut-off oligaemic areas shunting of blood), Hamptom's hump- wedge shaped consolidation in lung periphery, pleural based, rounded convex apex towards hilum), venous U/S
Pneumothorax	Acute onset of unilateral CP and dyspnea	Unilateral chest expansion, ↓ tactile fremitus, hyperresonance, ↓ breath sounds, mediastinal shift, cyanosis and hypoTN			CXR- pleural air; deep sulcus sign or shift of mediastinum
Aortic dissection	Hx of Marfan's or HTN; sudden, severe, radiation to back, groin, neck; syncope, hemiplegia or LE paralysis Sudden-onset tearing pain radiating to back, arms, jaw, neck	Shock, but nl or ↑ BP; pulse discrepancy (↓ peripheral), diastolic murmur of aortic insuf.	Normal, but may have LVH from HTN		CXR- abnl aortic contour or widened sup mediastinum; TEE
Pericarditis	Pleuritic pain, worse recumbent relieved with sitting; substernal but may radiate to neck, shoulders, back; dyspnea	Pericardial friction rub, fever *Positional CP*	Generalized ST and T wave changes→ progression with diffuse ST elevation, followed by baseline and then to T-wave inversion	CBC-leukocytosis	CXR- cardiac enlargement if fluid has collected
Esophageal reflux & spasm	Heartburn after meals; relieved with antacids; dysphagia; chronic cough				Endoscopy
Peptic ulcer disease	Nonspecific epigastric pain present in relation to meals; hx of NSAID use			CBC- leukocytosis suggests ulcer penetration or perforation; anemia may occur with bleeding ulcer	Endoscopy
Pneumonia	Fever, cough, dyspnea, sweats, rigors	Bronchial breath sounds or rales		CBC, Sputum culture, gram stain	CXR- infiltrate
MSK strain	Recent trauma, work-out	Reproducible pain Usually tender over specific point that reproduces pain			

ACS/CP "on the Fly"

chest pain

KR, Lee MD

Admit Orders
Intern Prep for ACS

chest pain

Admit orders

Non-ST Segment Elevation Myocardial Infarction (NSTEMI) and Unstable Angina

1. Admit to: Coronary care unit
2. Diagnosis: Acute coronary syndrome
3. Condition:
4. Vital Signs: q1h. Call physician if pulse >90,<60; BP >150/90, <90/60; R>25, <12; T >38.5°C.
5. Activity: Bed rest with bedside commode.
7. Nursing: Guaiac stools. If patient has chest pain, obtain 12-lead ECG and call physician.
8. Diet: Cardiac diet, 1-2 gm sodium, low fat, low cholesterol. No caffeine or temperature extremes.
9. IV Fluids: D5W at TKO
10. Special Medications:
    - -Oxygen 2-4 L/min by NC.
    - -Aspirin 325 mg PO, chew and swallow immediately, then aspirin EC 162 mg PO qd OR
    - -Clopidogrel (Plavix) 75 mg PO qd (if allergic to aspirin) OR
    - -Aspirin 325 mg to chew and swallow, then 81-162 mg PO qd PLUS clopidogrel 300 mg PO x 1, then 75 mg PO qd.
    - -Nitroglycerin infusion 10 mcg/min infusion (50 mg in 250-500 mL D5W, 100-200 mcg/mL). Titrate to control symptoms in 5-10 mcg/min steps, up to 1-3 mcg/kg/min; maintain systolic BP >90 OR
    - -Nitroglycerin SL, 0.4 mg mg SL q5min until pain-free (up to 3 tabs) OR
    - -Nitroglycerin spray (0.4 mg/aerosol spray) 1-2 sprays under the tongue q 5min; may repeat 2 times.
    - -Heparin 60 U/kg IV push, then 15 U/kg/hr by continuous IV infusion for 48 hours to maintain aPTT of 50-70 seconds. Check aPTTq6h x 4, then qd. Repeat aPTT 6 hours after each dosage change.

    Glycoprotein $IIb/IIIa$ Blockers in High-Risk Patients and Those with Planned Percutaneous Coronary Intervention (PCI):
    - -Eptifibatide (Integrilin) 180 mcg/kg IVP, then 2 mcg/kg/min for 48-72 hours OR
    - -Tirofiban (Aggrastat) 0.4 mcg/kg/min for 30 min, then 0.1 mcg/kg/min for 48-108 hours.

    Glycoprotein IIb/IIIa Blockers for Use During PCI:
    - -Abciximab (ReoPro) 0.25 mg/kg IVP, then 0.125 mcg/kg/min IV infusion for 12 hours OR
    - -Eptifibatide (Integrilin) 180 mcg/kg IVP, then 2 mcg/kg/min for 18-24 hours.

    Beta-Blockers: Contraindicated in cardiogenic shock.
    - -Metoprolol (Lopressor) 5 mg IV q2-5min x 3 doses; then 25 mg PO q6h for 48h, then 100 mg PO q12h; keep HR <60/min, hold if systolic BP <100 mm Hg OR
    - -Atenolol (Tenormin), 5 mg IV, repeated in 5 minutes, followed by 50-100 mg PO qd OR
    - -Esmolol (Brevibloc) 500 mcg/kg IV over 1 min, then 50 mcg/kg/min IV infusion, titrated to heart rate >60 bpm (max 300 mcg/kg/min).

    Angiotensin Converting Enzyme Inhibitors:
    - -Lisinopril (Zestril, Prinivil) 2.5-5 mg PO qd; titrate to 10-20 mg qd.
    - -Benazepril (Lotensin) 10 mg qd OR
    - -Ramipril (Altace) 5-10 mg qd OR
    - -Perindopril (Aceon) 4-8 mg qd.

    Long-Acting Nitrates:
    - -Nitroglycerin patch 0.2 mg/hr qd. Allow for nitrate-free period to prevent tachyphylaxis.
    - -Isosorbide dinitrate (Isordil) 10-60 mg PO tid [5,10,20, 30,40 mg] OR
    - -Isosorbide mononitrate (Imdur) 30-60 mg PO qd.

    Statins:
    - -Rosuvastatin (Crestor) 10 mg PO qd OR
    - -Atorvastatin (Lipitor) 10 mg PO qhs OR
    - -Pravastatin (Pravachol) 40 mg PO qhs OR
    - -Simvastatin (Zocor) 40 mg PO qhs OR
    - -Lovastatin (Mevacor) 20 mg PO qhs OR
    - -Fluvastatin (Lescol)10-20 mg PO qhs.
11. Symptomatic Medications:
    - -Morphine sulfate 2-4 mg IV push prn chest pain.
    - -Acetaminophen (Tylenol) 325-650 mg PO q4-6h prn headache.
    - -Lorazepam (Ativan) 1-2 mg PO tid-qid prn anxiety.
    - -Zolpidem (Ambien) 5-10 mg qhs prn insomnia.
    - -Docusate (Colace) 100 mg PO bid.
    - -Ondansetron (Zofran) 2-4 mg IV q4h prn N/V.
    - -Famotidine (Pepcid) 20 mg IV/PO bid OR
    - -Lansoprazole (Prevacid) 30 mg qd.
12. Extras: ECG stat and in 12h and in AM, portable CXR, impedance cardiography, echocardiogram. Cardiology consult.
13. Labs: SMA7 and 12, magnesium. Cardiac enzymes: CPK, CPK-MB, troponin T, myoglobin STAT and q6h for 24h. CBC, INR/PTT, UA.

MOANBATHS

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