

1. Title

Medicine I: Part II, cont.

Laboratory Tests and Signs and Symptoms (S/S) of Diseases

Kanchan Ganda M.D.

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2. American Society of Anesthesiologist (ASA) Status

American Society of Anesthesiologist (ASA) Status

- Assessed in all patients undergoing surgery using
Local or General anesthesia
- Judged by ability to climb a flight of stairs / walk 2 blocks
- It assesses the patient's Cardio Pulmonary status
- ASA I : No difficulty experienced climbing or walking
- ASA II : The patient is short of breath on reaching the top
but there is no difficulty climbing the stairs
- ASA III : The patient has to stop often while climbing but
does reach the top
- ASA IV : The patient cannot climb even a few steps

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3. Medications / Drugs to be Evaluated

Medications / Drugs to be Evaluated

- Prescribed Medications*
- OTC Preparations*
- Recreational Drugs*
- Anesthetics, Analgesics, Antibiotics*
- Drugs associated with Allergies
- Oral / Systemic intake of Corticosteroids*

* Previously discussed

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4. Medications / Drug History Assessment

Medications / Drug History Assessment: *Over-the-Counter (OTC) Medications*

- Cough/cold meds. or diet pills, contain Sympathetic agents
- The sympathetic agents synergize with Epinephrine
- Always ask the patient about the frequency of intake
- Defer routine dental treatment during acute cough/cold
- Patients can abuse Diet pills for weight loss
- Always check for the # of Diet pills taken per day
- Herbal meds. cause Platelet dysfunction
- Herbals are stopped 7 days prior to major treatment

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5. Medications / Drug History Assessment

Medications / Drug History Assessment: *Laxatives*

- Laxatives can cause Hypokalemia & Arrhythmias
- Always determine the amount of laxatives used per day
- Always check for hypokalemic s/s in abusers

Hypokalemia S/S:

- Muscle cramps, muscle weakness
- Tingling numbness in the hands and feet
- Irregular pulse, irregular heart beat

- Normal Potassium level : 3.5 - 5.5 mEq / L

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6. Medications / Drug History Assessment: Recreational Drugs...

Medications / Drug History Assessment: *Recreational Drugs*

Downers: Alcohol, Marijuana

- ◆ Alcohol can alter the potency of:
 - Anti-Seizure medications
 - Anti-Depressants
- ◆ Overuse of these downers , particularly Alcohol, can hasten the utilization of L.A.s

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7. Medications / Drug History Assessment: Recreational Drugs

Medications / Drug History Assessment: *Recreational Drugs*

Uppers: Cocaine, Amphetamines

- ◆ Uppers synergize with Epinephrine in the L.A.s
- ◆ Be even-toned and calm when questioning the patient about the use of recreational drugs
- ◆ *Never be accusatory*
- ◆ Check if the patient has swapped IV needles, during drug use

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8. Medications / Drug History Assessment: Recreational Drugs

Medications / Drug History Assessment: *Recreational Drugs*

- ◆ If you suspect “high risk” behavior, check for HIV / AIDS associated symptoms

S/S:

- ◆ Chronic H / O Tiredness, Weakness, Fatigue
- ◆ Night fever, Night sweats
- ◆ Anorexia, Weight loss, Diarrhea
- ◆ Cough with expectoration / bloody sputum
- ◆ Lymph adenopathy in the neck, axilla / abdomen

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9. Medications / Drug History Assessment

Medications / Drug History Assessment: *Medications Causing Allergic Reactions*

Always question the patient about allergies to the AAAs:

- Anesthetics
- Analgesics like:
 - Aspirin, NSAIDs
 - Codeine, Morphine, Vicodin, Oxycodone/Aceaminophen, Oxycodone/Aspirin
 - Meperidine, Propoxyphene
- Antibiotics like:
 - Penicillins and Sulpha drugs

Acetaminophen does not cause allergic reactions

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10. Medications / Drug History Assessment

Medications / Drug History Assessment: *Medications Causing Allergic Reactions*

- Always check if the patient has received potent pain medications during hospitalization
- Morphine or Codeine is often used
- Do not prescribe Codeine if the patient has responded adversely to Morphine
- Always ask the patient if he / she has taken Penicillin more than once, before prescribing

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11. Medications / Drug History Assessment

Medications / Drug History Assessment: *Medications Causing Allergic Reactions*

Allergic Reactions may be:

- Mild
- Moderate
- Severe
- Mild / Moderate reactions occur a few hours to a few days after exposure to an allergen
- Acute reactions can occur within an hour of exposure
- Most acute reactions usually manifest within the first 5-10 minutes of exposure

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12. Mild or Moderate Allergic Reaction

Mild or Moderate Allergic Reaction

Mild / Moderate reactions can cause:

- Local swelling
- Rash
- Itching
- Hives of varying sizes
- *Respiratory status is never compromised*

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13. Acute Allergic Reactions

Acute Allergic Reactions

The patient experiences a dramatic sequence of events:

- Restlessness, Perspiration and a Flushed appearance
- Watery eyes and Runny nose
- Profound breathing difficulty and chest tightness
- Cough, Dyspnea, Wheezing and Laryngeal edema
- The patient breaks out with hives and is itching all over

VITALS:

- The Pulse is Rapid and Thready
- The BP drops
- Loss of consciousness can occur in seconds or minutes
- Cardiac arrest can occur

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14. Medications / Drug History Assessment

Medications / Drug History Assessment: *Glucocorticoids / Corticosteroids / Cortisol*

- Glucocorticoids are stress fighting hormones
- Glucocorticoids are secreted by the Adrenal cortex
- Early morning secretion occurs in all patients with normal functioning Adrenal glands, daily
- During undue stress, the endogenous secretion is further boosted by the normal gland
- Intense fear, fever, infection, inflammation, trauma or bleeding could be the stresses experienced

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15.

Corticosteroids

Corticosteroids

- Normal mechanism of Cortisol release:
Hypothalamus → Pituitary → ACTH → Adrenal Cortex → Cortisol release
- Exogenous intake of Steroids inhibits ACTH release
- Especially when the patient has taken Steroids for *two weeks or longer within the past two years*
- It takes *two months to two years* for the Adrenal glands to function NORMALLY
- Always consult with the patient's M.D. if extra Steroids are needed prior to any major dentistry

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16.

Corticosteroids

Corticosteroids

- The maximum output of Cortisol in response to severe stress by a *normal* adrenal gland is equivalent to about 60 mg Prednisone
- Consequently prior to major dentistry, the maximum amount of Prednisone given is 60mg, PO / IV / IM

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17. Blood Tests for Diabetes

Blood Tests for Diabetes

- Fasting Blood Sugar (FBS): <125 mg/dL
- Current stringent FBS guideline: < 100 mg/dL
- Post Prandial (PP) or Post Meal: <140 mg/dL
- HbA₁C (4-6%): <7% in controlled patients
- HbA₁C >8%: Uncontrolled Diabetes in the past 2-3 months

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18. Sugar Values: Level of Control

Sugar Values: Level of Control

The Well-Controlled Patient:

- FBS: < 125 mg / dL
- PP: < 140 mg / dL
- HbA₁C: < 7%

The Moderately Controlled Patient:

- FBS: 125-140 mg / dL
- PP: 140-200 mg / dL
- HbA₁C: Between 7-8%

The Uncontrolled Patient:

- FBS: > 140 mg / dL
- PP: > 200 mg / dL
- HbA₁C: > 8%

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19.

Insulin

Insulin

Insulin is a Storage Hormone affecting Protein, Fat & Carbohydrate Metabolisms

Lack of Insulin affects the Metabolisms as follows:

- Protein Metabolism:
 - Loss of Muscle mass
- Fat Metabolism:
 - Loss of Fat Storage
 - Presence of Aceto Acetic acid & β Hydroxy Buteric acid in the blood
- Carbohydrate Metabolism:
 - Loss of CHO storage causing Hyperglycemia & Glycosuria

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20.

DM: Types

DM: Types

Type I:

- Insulin dependent diabetes
- Common in Children & Young Adults below 40
- Occasionally occurs in Older Adults
- Patients are usually lean
- Rx: Daily Insulin injections

Type II:

- Patients are usually obese but some can be lean
- Affects Adults over 40 & OBESE Kids & Young Adults
- Insulin Resistance causes diabetes
- Rx: Oral Agents and / or Insulin

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21.

DM: Symptoms

DM: Symptoms

Type I:

- Polyuria and Nocturia
- Polydypsia
- Polyphagia
- Weight loss

Type II:

- Weight gain
- Usually Asymptomatic with Accidental detection at Checkup
- Opportunistic infections involving the Skin:
 - Mucous Membranes
 - Urinary Tract
- Poor wound healing

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22.

Hyperthyroidism

Hyperthyroidism

Symptoms:

- Heat intolerance
- Excessive Sweating and Warm Moist Skin
- Increased Appetite associated with Weight Loss
- Thin Sparse Hair
- Fine Hand tremors & Tremulous handwriting
- Hyperactivity
- Short attention span
- Diarrhea

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23.

Hyperthyroidism

Hyperthyroidism

Signs:

- Palpitations
- "Resting Tachycardia"
- May have Atrial Fibrillation (AF)
- \uparrow SBP & \downarrow DBP
- This results in a "Widened Pulse Pressure (PP)"
- Positive "Lid Lag Test"
- May have Functional heart murmur
- No Premeditation required for the functional murmur

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24.

Hypothyroidism: Symptoms

Hypothyroidism: Symptoms

- Tiredness, Weakness, Fatigue
- Social withdrawal and Depression
- Weight gain and Hoarseness
- Cold intolerance and Raynaud's phenomenon
- Decreased sweating
- Thick coarse hair
- Facial myxedema
- Loss of lateral third of the eyebrows
- Cold dry thickened skin
- Constipation

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25.

Hypothyroidism

Hypothyroidism

Signs:

- Bradycardia
- The SBP is DECREASED due to low BMR
- The DBP is INCREASED due to vasoconstriction
- This results in a "Narrowed PP"

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26.

Grand Mal Seizures

Grand Mal Seizures

A Grand Mal Seizure can be associated with:

- A Prodromal Phase
- An Ictal or Seizure Phase

The Ictal / Seizure Phase can be associated with:

- The Aura
- The Tonic Phase
- The Clonic Phase
- The Flaccid Phase

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27.

Seizures

Seizures

Prodromal Phase:

- Lasts for minutes to hours
- Occurs PRIOR to the seizure
- Only some patients experience Prodromal symptoms
- If present, the specific symptoms will always reoccur

Seizure / Ictal Phase:

- Lasts 2 - 5 minutes
- Consists of the Aura, Tonic, Clonic and Flaccid phases

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28.

Seizure: Aura

Seizure: Aura

Aura:

- It is the start of the ICTAL / SEIZURE phase
- The patient may or may not give a H/O Aura
- Patient experiences Sensory or Visual symptoms
- Always reoccur with every attack when present
- Patient is CONSCIOUS
- The patient is not aware of his surroundings
- Make the chair horizontal when the patient has Aura
- Form a human shield around the patient
- DO NOT PUT ANYTHING IN THE MOUTH

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29.

Seizure: Tonic Phase

Seizure: Tonic Phase

- Follows the Aura , when Aura is present
- Lasts for LESS than one minute
- The patient collapses
- The patient gives out a loud cry
- Takes in a deep breath
- Becomes unconscious
- The entire body becomes hyper extended
- The patient can turn blue
- DO NOT HOLD THE PATIENT DOWN

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30.

Seizure: Clonic Phase

Seizure: Clonic Phase

- Follows the Tonic phase
- Also lasts for less than one minute
- The patient resumes breathing
- The entire body starts jerking
- The patient is still unconscious
- Do not hold the patient down
- Prevent injuries to the patient and to yourself

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31. Seizure: Flaccid Phase

Seizure: Flaccid Phase

- Follows the Clonic Phase
- All the muscles are now relaxed
- The body becomes limp
- Frothing occurs at the mouth
- The tongue falls back
- Grunting occurs
- Incontinence of the bowel & / the bladder occurs

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32. Petit Mal Epilepsy

Petit Mal Epilepsy

- Occurs most commonly in Children
- Rare in Adults
- There is no loss of consciousness
- There is loss of contact with reality
- Associated with a momentary lull in the conversation or a blank stare
- The patient never falls to the ground
- Recovery occurs in a few seconds

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33.

Gastrointestinal Conditions

Gastrointestinal Conditions

Heartburn / Esophagitis:

- Retro sternal discomfort
- Sour taste in the mouth
- Decreased dentine enamel

Hiatal Hernia: Stomach slides into the thoracic cavity

- Common in obese women in their 40s
- Heartburn is exacerbated on lying down
- S / S of heartburn present
- Check for black tarry stools

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34.

G.I. Conditions

G.I. Conditions

Peptic Ulcers: Gastric / Duodenal (DU)

- Peptic Ulcers cause epigastric pain
- Gastric ulcer pain is relieved with food
- DU pain comes on 2 hours after eating
- Upper GI bleed causes black, tarry stools
- In ALL patients with H/O Heartburns, Hiatal Hernia or Peptic Ulcers, check for chronic use of :
 - Aspirin
 - NSAIDs
 - Steroids

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35. G.I. Conditions: Small Intestinal Disease

G.I. Conditions: Small Intestinal Disease

Coeliac Disease: Gluten hypersensitivity

Malabsorption causes:

- Anemia
- Glossitis
- Burning mouth and tongue
- Angular Cheilitis
- Decreased Vitamin K levels

Crohn's Disease: Regional Ileitis

- Associated with Chronic ulceration / inflammation
- Both cause: Malabsorption; Bulky foul smelling stools

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36. G.I. Conditions: Large Intestinal Disease

G.I. Conditions: Large Intestinal Disease

Ulcerative Colitis:

Ulcerative Colitis is associated with :

- Fresh blood in the stools (lower G.I. bleed)
- Abdominal pain, Cramping, Constipation / Diarrhea
- Uveitis
- Arthritis
- Anorexia and weight loss

Diverticulitis:

- Abdominal pain, Cramping, Constipation, Flatulence
- Fresh blood in the stools

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37. Viral Hepatitis: Transmission and Incubation Periods

Viral Hepatitis: Transmission and Incubation Periods

Incubation Period:

- Hepatitis A: 2-6 weeks
- Hepatitis E: 2-9 weeks

Type:

"Acute" types of hepatitis

Transmission:

Food & Water borne

Incubation Period:

- Hepatitis B: 2-6 months
- Hepatitis C: 15-150 days
- Hepatitis D: Unlimited (Restricted by Hep. B)

Type:

"Chronic" type of Hepatitis

Transmission:

Blood borne

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38. Viral Hepatitis - Symptoms and Signs

Viral Hepatitis - Symptoms and Signs

Hepatitis causes the following symptoms:

- Acute or Chronic: Depending on the type of Hepatitis
- Tiredness, weakness, fatigue and loss of stamina
- Nausea, vomiting, diarrhea and anorexia
- Fever and Flu-like symptoms
- "dark-colored" urine
- Yellowing of the skin and sclera, if jaundice occurs

Hepatitis B, C or D also cause:

- Skin Rash
- Aversion to smoking, Weight loss, Arthralgia

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39.

Jaundice / Icterus

Jaundice / Icterus

- Elevated levels of Billirubin in the blood is associated with "dark colored" urine
- Obstructive jaundice causes impairment of excretion of bile into the small intestines
- This results in the loss of the "normal yellowing"of the stools
- The stools are then "white or acholic"

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40.

Viral Hepatitis - Symptoms and Signs

Viral Hepatitis - Symptoms and Signs

- Jaundice occurs in 70% of Hepatitis A cases
- Jaundice occurs in 30%-40% of Hepatitis B cases

In all types of Hepatitis symptoms usually occur during:

- The incubation period and during the early part of jaundice
- Appearance of jaundice indicates recovery is going to occur in the near future

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41. Liver Function Tests: Enzymes

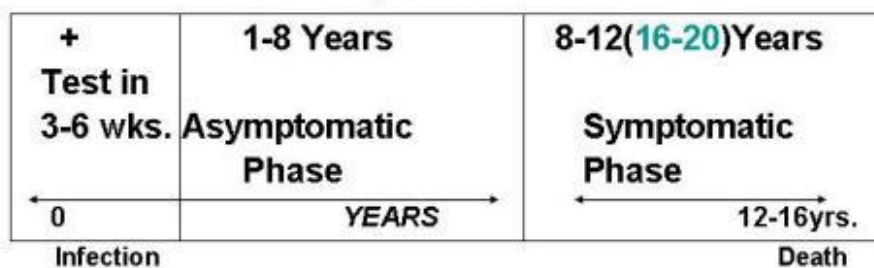
Liver Function Tests: Enzymes

- Serum Glutamic - Pyruvic Transaminase (SGPT or ALT):
 - Is specifically associated with the liver cells only
 - SGPT / ALT levels increase with liver "cell inflammation"
- Serum Glutamic - Oxaloacetic Transaminase (SGOT / AST):
 - Associated with Liver, Brain and Heart tissues
 - SGOT / AST is associated with "cell necrosis"
- Hepatitis: ALT is always greater than AST
- Cirrhosis: AST is always greater than ALT

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42. HIV-- Spectrum Illness

HIV-- Spectrum Illness



- HIV : RNA virus
- 3-6 wks./3-6 months: + ELISA & WESTERN BLOT Tests
- Normal CD₄ / T₄ count :1000 cells
- 1-8 years: Asymptomatic Phase; T₄ cells slowly decline
- 8-12 (16-20) years: Symptomatic phase
- AIDS : CD₄ count is < 200 cells

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43.

HIV/AIDS

HIV/AIDS

- The viral RNA is transferred into the DNA of the host cell by Reverse Transcriptase
- HIV infection affects the following cells:
 - The CD₄ receptors of the T₄ Lymphocytes
 - Monocytes
 - Macrophages
 - Neural / Glial cells
 - B Lymphocytes

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44.

HIV/AIDS Tests: CD4 and Viral Load

HIV/AIDS Tests: CD₄ and Viral Load

- The CD₄ count provides an estimate of the patient's immune system status
- CD₄ counts are also used to determine a patient's response to therapy
- Viral Load / HIV RNA level is a strong predictor of disease progression
- Undetectable Viral Load:
HIV RNA levels are below 50 / 75 copies / mL

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45.

HIV / AIDS

HIV / AIDS

HIV Infection causes:

- Defective Cell mediated immunity
- Defective Lymphokine mediated Humoral immunity

- This accounts for the increased incidence of opportunistic infections associated with AIDS

- The virus has been isolated from all bodily fluids, very particularly from blood and seminal fluid

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46.

HIV / AIDS

HIV / AIDS

- HIV/AIDS was most prevalent amongst MSMs :Men having Sex with Men
- Today HIV/AIDS is most prevalent amongst heterosexual women
- Most patients are initially asymptomatic
- Some get an "Infectious Mononucleosis" type illness
- The "Mono" S/S develop 1-2 wks. after initial infection

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47.

HIV / AIDS

HIV / AIDS

- Most patients develop antibodies within 3 - 6 weeks following infection
- Some may take 3 - 6 months to form antibodies

Antibodies are detected by the following tests:

- ELISA test (99% sensitive)
- The Western Blot Test (99.5% sensitive)
- Rapid HIV testing with NSIs*: Results in 1 hour

* Needle Stick Injuries

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48.

HIV / AIDS

HIV / AIDS

- S/S when the patient is symptomatic :
- Tiredness, weakness, fatigue
- Anorexia, weight loss
- Chronic diarrhea
- Cough with expectoration / bloody sputum
- Night fevers, night sweats
- Depression, social withdrawal
- Forgetfulness

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49.

HIV / AIDS

HIV / AIDS

Signs commonly seen with HIV / AIDS are:

- Oral candidiasis
- OVL (Oral Viral Leukoplakia) due to EB Virus
- Kaposi Sarcoma
- Generalized lymph adenopathy

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50.

Sexually Transmitted Diseases (STDs)

Sexually Transmitted Diseases (STDs)

STDs cause:

- Pain and burning on urination (Dysuria)
- Itching
- Blood in the urine (Hematuria)
- Pus in the urine (Pyuria)
- "Sores on the bottom"
- Check for H/O Syphilis, Gonorrhea or Chlamydia
- If "yes", check for completion of treatment
- Inform the patient that ALL patients get asked about a H/O STDs

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51.

Rheumatoid Arthritis

Rheumatoid Arthritis

- Immune mediated connective tissue disorder
- It is a progressive disease
- Commonly affects women age 30-35 years
- Large and small joints are affected *bilaterally*
- Knuckles and Proximal Inter Phalangeal (PIP) joints in the hands are often involved
- Joint disease is associated with joint deformity
- Ulnar deviation of the hands can occur
- Joint pain / stiffness is most in the morning
- Pain / stiffness improves as the day progresses

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52.

Rheumatoid Arthritis

Rheumatoid Arthritis

Systemic S/S often seen are:

- Low grade Fever
 - Fatigue
 - Anorexia and Weight loss
 - Raynaud's phenomenon
 - Anemia
 - Thrombocytopenia
-
- TMJ and Cervical spine are frequently affected
 - Treatment: Aspirin; NSAIDs; Corticosteroids

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53.

Osteoarthritis

Osteoarthritis

- Degenerative arthritis
- Affects middle aged women
- Major joints are affected *unilaterally*
- Distal Inter Phalyngeal (DIP) joints are also affected *unilaterally*
- Pain is most pronounced at night
- Lumbar spine is commonly affected
- No systemic S/S are present
- Medical Rx: Aspirin, NSAIDs, Steroids

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54.

Systemic Lupus Erythematosus (SLE)

Systemic Lupus Erythematosus (SLE)

- Patient profile is the same as R.A
- The type of arthritis is the same as R.A
- Systemic S/S are the same as R.A
- Classic Butterfly rash associated with SLE only
- The Rash is never below the smile lines
- Headaches & Depression are often experienced
- Anemia & Thrombocytopenia seen on CBC

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55.

Neurological History

Neurological History

- Check for anxiety on seeing a Dentist
- Check for fear of blood or needles
- Provide stress management for such patients
- Check for "glove & stocking" type of neuropathy causing pins & needles sensation
- Diabetics affected with this type of neuropathy
- Check for H/O Migraines
- Check for H/O Tremors
- Tremors may be benign or due to Parkinson's Disease

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56.

Ophthalmic History

Ophthalmic History

- Elicit a H/O vision problems, halos, eye pain
- Halos commonly occur with glaucoma
- Halos: The patient sees a white ring around lights
- Treat Glaucoma patients in a semi sitting position
- Check for Exophthalmus or Enophthalmus
- Exophthalmus is associated with Grave's Disease
- The Lid Lag test will be positive
- Enophthalmus is associated with excessive weight loss, due to Anorexia; HIV/AIDS; Cancers

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57.

OCs / Pregnancy / Lactation

OCs / Pregnancy / Lactation

- Antibiotics decrease the potency of OCs
- All oral antibiotics affect OCs
- The Patient takes extra precautions till the end of the next cycle to prevent pregnancy if antibiotics are prescribed
- Norplant is not affected by oral antibiotics
- Pregnancy is not a contraindication to dentistry

- The Lactating Patient is treated AFTER breastfeeding

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58.

Organ Transplants

Organ Transplants

- Determine the date of the organ transplant
- Routine dentistry is done 6 months AFTER the transplant
- Always obtain labs to determine the status of the transplant organ
- Premedicate renal transplant patients who were on hemodialysis prior to the transplant

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59.

Psychiatric Disorders

Psychiatric Disorders

- It is best to ask a patient if he / she is or has been under the care of a Psychologist or Psychiatrist for any problems
- If the response is "yes" then ask the patient what is the condition being treated?
- How does the patient feel now?
- Any Trigger points you should be aware of?
- Anorexia and Bulimia can cause enamel loss

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60.

Questions?

Questions?

- Always ask the Patient if you have questioned him completely about his health
- Has there been any accidental omission?
- Is there anything additional the Patient would like you, the Clinician, to know?
- The Patient will always be appreciative of your thoroughness!

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61.

Radiation

Radiation

- Always question the patient about Radiation to the Head & Neck
- Dental extractions done following high dose Radiation to the Head & Neck can cause osteoradio necrosis

Necrosis can occur when the Radiation dose exceeds:

- ≥ 6500 Rads
- or
- ≥ 65 Gray*

*1 Gray / Gy. = 100 Rads

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62.

Radiation

Radiation

- Hyperbaric O₂ is used Pre & Post operatively to stimulate angiogenesis & this prevents necrosis
- Excessive Radiation dose affect persists lifelong
- Check for H/O Radiation to other body areas too
- Request CBC if Radiation was recent or is ongoing

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63. Guidelines for Prescription Writing

Guidelines for Prescription Writing

- You can legally prescribe only those drugs related to your practice
- Know the Patient, Patient's history, current meds and disease status
- Do not prescribe as a "favor" for someone
- Prescribe only those drugs with which you are familiar
- Do not allow the patient to prescribe for you
- Use the metric system
- Use generic names unless the item is a fixed combination, e.g., Tylenol #3
- *Do not abbreviate and write clearly*

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64. Guidelines for Prescription Writing

Guidelines for Prescription Writing

- Write clear and complete instructions in English and in ink
- Do not use "as directed"

Prescribe the correct quantity, e.g:

- 5-7 days supply for most full-course antibiotic therapies
- 2-3-day course of analgesics and/or sedatives
- Prescribe a reasonable number of refills, including zero
- Prescribe doses that are both correct and measurable
- Maintain records of what you prescribe

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65. Guidelines for Prescription Writing

Guidelines for Prescription Writing

- Establish a good rapport with the patient and explain how to use the prescribed medication
- Communicate telephone orders directly and clearly to a Pharmacist when telephoning prescriptions
- Instruct the Patient to:
 - a. Take the drug as prescribed
 - b. Read the label on the prescription container
 - c. Store drugs properly
 - d. Discard after one year

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66. Elements of a Prescription

Elements of a Prescription

Elements of a Prescription Include:

Patient's name, address, and age:

- **Date:** Most prescriptions must be filled within 6 months
- **Rx (Recipe):** Latin for "recipe": Drug name (usually Generic), strength & type
- If you specifically want a brand name you must designate "no substitution"
- List the strength of the product (mg/ml) & form (tablets, capsules, suspension)
- **Dispense:** Amount of drug (# of capsules), or time period (1 month supply, etc.)

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67. Frequently used Abbreviations

Frequently used Abbreviations

- T: one
- PO: by mouth
- Qd: daily
- PRN: as needed
- Qhs: every night at bedtime
- Q6h: every 6 hours* qid four times a day**
- *Refills*: Indicate how many times that drug can be re-filled
- *Substitution*: Can a Generic drug be used instead of the one prescribed?
- Note that qid and q6h are *not* the same orders

*qid means that the Med is given four times a day while awake (e.g., 8 am, 12 noon, 6 pm, & 10 pm)

**q6h means that the Med is given four times a day but *by the clock* (6 am, 12 noon, 6 pm, 12am)

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68. DEA Drug Schedules

DEA Drug Schedules

Schedule I:

- Heroin, Marijuana
- No proven therapeutic indication
- Significant abuse potential
- No FDA approval
- Usually used only for research purposes

Schedule II:

- Narcotics: Percocet (Oxycodone + Acetaminophen) and Amphetamines
- Limited therapeutic indications
- High abuse potential
- FDA-approved clinical indications
- Records: receipt and dispensing at Pharmacy and Physician's office
- Need special order forms
- Need DEA number to prescribe
- No refills
- Emergency telephone orders (prescriptions) only

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DEA Drug Schedules

DEA Drug Schedules

Schedules III/IV:

- Opiate-like drugs: Vicodin: (Propoxyphene + Acetaminophen);
Tylenol # 3: (Tylenol + Codeine), drug combinations
- Limited therapeutic applications
- Lower, but real, abuse potential
- FDA-approved indications
- Records: Need DEA number to prescribe
- Maximum of five refills in 6 months

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DEA Drug Schedules

DEA Drug Schedules

Schedule V

- Formerly "exempt narcotics":
 - Codeine-containing cough preparations
- Limited abuse potential
- Records: Need DEA number
- Maximum of five refills in 6 months
- Laws and regulations vary by state

Schedule VI

- Only in Massachusetts
- All prescription "legend" drugs
- Legend refers to the FDA-required statement:
 - *"Caution—Federal Law Prohibits Dispensing Without a Prescription"*
- Examples: Ibuprofen, Indomethacin

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Prescription Sample

Prescription Sample

TUFTS UNIVERSITY SCHOOL OF DENTAL MEDICINE
One Pinealand Street
Boston, MA 02111
655-869-9999

Name: Jane Doe
Age: 28
Address: 10 Pinealand Street
Boston, MA 02111
Date: 12/03/06

Drug: Amoxicillin 500 mg / capsule

Directions: 500 mg qid x 5 days

Quantity: 20

Refills: 0 (zero)

DEA #: XX55372

Signature:

Print Name:

INTERCHANGE is mandated unless the practitioner
Writes the words "NO SUBSTITUTION" in this space.

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