Disclaimer

Please note that the author of this e-book, titled "Physical Signs and Differential Diagnosis," has successfully passed USMLE Steps 1, 2, and 3, and has been a USMLE tutor for the past 4 years. The contents of this e-book are based on the author's accumulated notes and knowledge, which have been corrected and revised with updated information.

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- Holosystolic, harsh-sounding murmur. Loudest at the tricuspid area - Ventricular septal defect
- High-pitched “blowing” early diastolic decrescendo murmur - Aortic regurgitation
- opening snap - Mitral stenosis
- Continuous machine-like murmur at the left infraclavicular area, loudest at S2 - Patent ductus arteriosus
- Austin Flint murmur: Aortic regurgitation
- S3 gallop: Dilated cardiomyopathy, Pregnancy (physiologic)
- S4: LVH, older age (physiological), Hypertrophic obstructive cardiomyopathy

Physical signs

- late cyanosis in the lower extremities (differential cyanosis): PDA
- Head bobbing sign: AR
- Plaques or nodules composed of lipid-laden histiocytes in the skin, especially the eyelids: Xanthelasma (Xanthomas)
- Lipid deposit in the tendon, especially Achilles: Tendinous xanthoma
- Lipid deposit in the cornea: Corneal arcus
- Round white spots on retina surrounded by hemorrhage (Roth spots): Bacterial endocarditis
- Painful raised lesions on finger or toe pads due to immune complex deposition (Osler nodes): Bacterial endocarditis

- Small, painless, erythematous lesions on palm or sole (Janeway lesions): Bacterial endocarditis
- Splinter hemorrhages on the nail bed: Bacterial endocarditis
- Increased JVP on inspiration instead of a normal decrease (Kussmaul sign): constrictive pericarditis, restrictive cardiomyopathies, right heart failure, massive pulmonary embolism, right atrial or ventricular tumors

BP/Pulse and sign

- Water hammer bounding pulse: AR
- Hypertension in upper extremities and weak, delayed pulse in lower extremities (brachial-femoral delay): Coarctation of the aorta
- Palpable pulsatile abdominal mass: Aortic aneurysm Drop in systolic BP by > 10 mmHg during inspiration (Pulsus paradoxus): constrictive
- Pericarditis, obstructive pulmonary disease (eg, Croup, OSA, Asthma, COPD), cardiac Tamponade.
- Pulseless disease" (weak upper extremity pulses): Takayasu arteritis

Other

- Orthopnea, Paroxysmal nocturnal dyspnea, Pulmonary edema: Left heart failure
- Hepatomegaly (nutmeg liver), Jugular venous distention, Peripheral edema: Right heart failure

- Sausage-shaped mass on palpation in mid epigastrium (Dance sign): Intussusception
- Absent Hepatojugular reflux: Budd chiari syndrome
- Inspiratory arrest on RUQ palpation due to pain: Murphy's sign
- Redness and tenderness on palpation of extremities (Trousseau syndrome): Migratory thrombophlebitis

Neurology

- A tuft of hair or skin dimple at the lower level of bony defect: Spina bifida occulta (Failure of caudal neuropore to close)
- Meninges herniate through bony defect: Meningocele
- Meninges and neural tissue (eg, cauda equina) herniate through bony defect: Myelomeningocele
- Unfused neural tissue without skin/meningeal covering: Myeloschisis (rachischisis)
- No forebrain and open calvarium: Anencephaly (Failure of rostral neuropore to close)

Dermatology

- Flat skin lesion with well-circumscribed change in skin color < 1 cm: Macule (Freckle labial macule)
- Macule > 1 cm: Patch (congenital nevus)
- Elevated solid skin lesion < 1 cm: Papule (Mole, acne)
- Papule > 1 cm: Plaque (Psoriasis)
- Small fluid-containing blister < 1 cm: Vesicle (Chickenpox, shingles)
- Large fluid-containing blister > 1 cm: Bulla (Bullous pemphigoid)
- Vesicle containing pus Pustular: Pustule (psoriasis)
- Transient smooth papule or plaque Hives: Wheal (urticaria)
- Flaking off of stratum corneum: Scale (Eczema, psoriasis, SCC)
- Dry exudate: Crust (Impetigo)
- Normal melanocyte number with ↓ melanin production: albinism
- Irregular patches of complete depigmentation due to destruction of melanocytes: Vitiligo
- Acquired hyperpigmentation associated with pregnancy or OCP use: Melasma (chloasma)
- Erythematous, well-demarcated plaques with greasy yellow scales in areas rich in sebaceous glands, such as the scalp, face, and periocular region:

- Exotoxin destroys keratinocyte attachments in stratum granulosum, Characterized by fever and generalized erythematous rash, ⊕ Nikolsky sign: Staphylococcal scalded skin syndrome
- Cluster vesicles on lips, mucosa, labia, or skin. Seen in immunocompromised patients: Herpes infection
- Umbilicated papules and sexually transmitted in adults: Molluscum contagiosum
- Multiple crops of lesions in various stages from vesicles to crusts are seen in dermatome distribution: Varicella zoster virus (varicella (chickenpox) and zoster (shingles)
- Irregular, white, painless plaques on the lateral tongue that cannot be scraped off, occur in HIV-positive patients, and organ transplant recipients: Hairy leukoplakia (EBV mediated) (precancerous)
- White, painless plaques on the lateral tongue that can be scraped off, occur in the immunocompromised patient, TPN, and chronic antibiotic use: Oral Candidiasis (oral thrush)