GENERAL

nail exam questions and answers

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Introduction

Preparing for a dermatology or general practice exam often means tackling a wide array of clinical scenarios, and the nail unit is no exception. Nail exam questions test your ability to recognize subtle physical findings, differentiate between common and rare conditions, and apply evidence based management strategies. Whether you're a medical student, resident, or board prepared practitioner, mastering nail exam questions and answers is essential for clinical competence and exam success.

This guide offers a comprehensive review of nail exam questions, including key concepts, frequently tested disorders, sample questions with detailed explanations, and proven study strategies. By the end, you'll feel confident navigating the nail unit on any exam and in real world practice.

Understanding the Nail Unit

Basic Anatomy and Physiology

The nail unit consists of the nail plate, nail bed, matrix, cuticle, hyponychium, and surrounding skin. Each component plays a role in nail growth and integrity:

- Matrix: The growth zone; responsible for nail plate production.
- Nail Bed: The skin beneath the nail plate; provides vascular support.
- Cuticle: The skin that overlies the proximal nail fold; protects the matrix.
- Hyponychium: The skin under the free edge; acts as a barrier.

Understanding these structures helps you localize lesions and predict how various pathologies will present on exam.

Clinical Examination Techniques

When performing a nail exam, follow a systematic approach:

1. Inspection: Look for changes in color, thickness, texture, and shape.
2. Palpation: Assess tenderness, subungual masses, or fluid collections.
3. Staining: Use iodine or fluorescein to detect fungal infections or subungual hematomas.
4. Photography: Document baseline for monitoring progression or treatment response.

These steps are frequently referenced in exam questions, so practice each one until it becomes second nature.

Common Nail Disorders Covered in Exams

Exams often focus on high yield conditions that present in primary care and dermatology settings. Below is a quick reference list of the most commonly tested disorders:

- Onychomycosis – fungal infection of the nail plate.
- Psoriasis of the nails – pitting, onycholysis, and subungual hyperkeratosis.
- Ingrown toenail (Onychocryptosis) – painful, often with infection.
- Traumatic nail changes – subungual hematoma, splinter hemorrhages.

- Onychomatricoma – rare fibroepithelial tumor.
- Subungual melanoma – longitudinal melanonychia.
- Trachoma of the nail – nail plate ridging and discoloration.
- Systemic disease manifestations – e.g., anemia, thyroid disease, scleroderma.

Sample Nail Exam Questions & Answers

Below are representative questions that cover a range of difficulty levels, each followed by a detailed answer. These examples illustrate how to apply clinical reasoning and evidence based knowledge.

Question 1 – Onychomycosis Diagnosis

A 45 year old woman presents with thickened, yellowish toenails and mild pain. She reports no history of trauma. Which of the following is the most appropriate next step?

1. Start oral terbinafine immediately.
2. Order a potassium hydroxide (KOH) preparation of nail clippings.
3. Prescribe topical ciclopirox nail lacquer.
4. Recommend regular foot hygiene and moisturization.

Answer:B – Order a KOH preparation. Before initiating therapy, confirm the diagnosis with a fungal culture or KOH prep to avoid unnecessary exposure to systemic antifungals.

Question 2 – Nail Psoriasis Features

A 32 year old man has pitting on the lateral nail folds of both thumbs. He has a history of plaque psoriasis. Which nail sign is most characteristic of psoriasis?

1. Onycholysis
2. Subungual hyperkeratosis
3. Longitudinal ridging
4. Yellow nail syndrome

Answer:A – Onycholysis. While pitting is common, onycholysis is a classic finding in psoriatic nails, especially when associated with systemic disease.

Question 3 – Differential Diagnosis of Splinter Hemorrhages

A 60 year old man presents with splinter hemorrhages under the fingernails. He denies trauma or recent illness. Which condition is the least likely cause?

1. Endocarditis
2. Psoriasis
3. Trauma
4. Systemic lupus erythematosus (SLE)

Answer:C – Trauma. Splinter hemorrhages are typically associated with systemic conditions (e.g., endocarditis, SLE) or chronic inflammatory dermatoses, not with minor trauma alone.

Question 4 – Subungual Melanoma Identification

A 55 year old woman has a dark brown streak along the middle third of her left great toenail. The streak has widened over the past year. Which feature most strongly suggests malignant melanoma?

1. Uniform width of the streak
2. Presence of an associated subungual mass

3. Yellow discoloration of the nail plate
4. History of trauma to the toe

Answer:B – Presence of an associated subungual mass. While streak width is important, a mass suggests invasive growth and warrants urgent biopsy.

Question 5 – Management of Ingrown Toenail

A 28 year old runner presents with a painful, inflamed ingrown toenail of the second toe. Which of the following is the most appropriate initial management?

1. Oral antibiotics and pain control.
2. Partial nail avulsion with chemical cauterization.
3. Topical antifungals.
4. Referral for surgical nail bed excision.

Answer:B – Partial nail avulsion with chemical cauterization. This is the standard first line treatment for uncomplicated ingrown toenails.

Question Categories and Key Themes

Exam questions can be grouped into several categories, each requiring specific knowledge and skills.

Clinical Presentation and Examination

These questions test your ability to recognize physical findings and differentiate between similar conditions. Practice by reviewing high yield images and performing mock exams.

Histopathology and Laboratory Confirmation

Understanding the microscopic features of nail diseases (e.g., fungal hyphae in onychomycosis, melanocytic nests in melanoma) is crucial for interpreting pathology reports and selecting appropriate tests.

Management and Treatment Algorithms

Questions often present a case scenario and ask for the best next step. Familiarize yourself with current guidelines (e.g., IDSA for fungal infections, AAD for psoriasis) to answer confidently.

Systemic Associations

Many nail changes reflect underlying systemic disease. Recognize red flags (e.g., longitudinal melanonychia in a patient with a history of smoking) that warrant further investigation.

Sample Question Bank – 10 Practice Questions

Use this bank to test yourself. Mark each answer, then review the explanations to understand the rationale.

- A. KOH preparation
- B. Nail biopsy
- C. Dermoscopy
- D. Blood culture

Answer: A – KOH preparation. It is the quickest, most cost effective initial test for onychomycosis.

Question:A patient with rheumatoid arthritis presents with nail pitting and onycholysis. Which medication may exacerbate these findings?

- A. Methotrexate
- B. Sulfasalazine
- C. Prednisone
- D. Hydroxychloroquine

Answer: A – Methotrexate can worsen nail psoriasis, especially in patients with underlying psoriatic arthritis.

Question: Which of the following is NOT a typical feature of subungual melanoma?

- A. Variable pigmentation
- B. Rapid increase in width
- C. Nail plate thickening
- D. Uniformly pale nail

Answer: D – Uniformly pale nail is not characteristic; melanoma usually presents with pigmented streaks.

Question:A 35 year old woman complains of a painful, swollen toenail after a sports injury. Which imaging modality is best to rule out subungual fracture?

- A. X ray
- B. Ultrasound
- C. MRI
- D. CT scan

Answer: A – X ray is sufficient for detecting bone fractures under the nail.

Question: In a patient with chronic kidney disease, yellow nail syndrome is most likely associated with which respiratory manifestation?

- A. Bronchiectasis
- B. Pulmonary edema
- C. Pulmonary embolism
- D. Asthma

Answer: B – Pulmonary edema is a classic component of yellow nail syndrome.

Question: Which of the following best describes the nail changes seen in systemic sclerosis?

- A. Onycholysis and pitting
- B. Nail bed hyperemia and thickening
- C. Longitudinal ridging
- D. All of the above

Answer: D – Systemic sclerosis can present with all these nail manifestations.

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