

Fibroepithelial Polyp

Acrochordon • skin tag

Clinical morphology | histopathology | differential diagnosis

Dr Abu Suraih Sakhri

MBBS, MD (Pathology)

www.abusuraihsakhri.com

Learning outcomes

- Recognize the typical soft, pedunculated cutaneous lesion and its clinical distribution.
- Explain the fibrovascular core and benign epithelial covering on histology.
- Distinguish common mimics and identify when biopsy or specialist review is appropriate.
- Interpret metabolic associations and rare syndromic clues without overdiagnosis.

Place in the skin pathology curriculum

- A common benign exophytic cutaneous lesion in the benign epithelial-tumor chapter.
- The central diagnostic task is lesion recognition, not cancer staging or grading.
- Morphology, clinical context and differential diagnosis determine management.

Terminology: One entity, several labels

- Fibroepithelial polyp, acrochordon and skin tag refer to the usual cutaneous lesion.
- Other descriptive terms include soft fibroma or cutaneous tag.
- “Squamous papilloma” may be used broadly; Site and histology must resolve ambiguity.

The diagnostic definition

Appearance

Soft, benign, exophytic skin growth

Attachment

Often on a narrow pedicle

Core

Fibrovascular connective tissue

Covering

Benign squamous epithelium

Benignity is a histologic statement

- Conventional acrochordons lack invasive malignant architecture.
- The surface squamous epithelium is cytologically benign.
- An atypical or changing polypoid lesion should not be assumed to be an acrochordon.

Anatomical distribution

- Common sites include the neck, trunk, face and intertriginous regions.
- Axillae and groin are typical high-friction sites.
- Eyelids and other skin folds may be involved; Localization alone is not diagnostic.

Age pattern

- Usually becomes clinically apparent in middle-aged or older adults.
- Number and prominence may increase over time.
- Skin tags can occur in younger patients; Unusual age increases the value of context.

Three recognized clinical forms

Small papule

Tiny soft outgrowth in a skin fold

Filiform

Narrow thread-like process

Pedunculated

Broader soft head on a stalk

Macroscopic consistency

- Typical lesion is soft and compressible rather than fixed or indurated.
- A “bag-like” appearance reflects the soft connective-tissue core.
- Firmness, ulceration or persistent spontaneous bleeding may merit closer evaluation.

Surface coloration

- Commonly skin-colored or mildly hyperpigmented.
- Lesions may be paler or darker than adjacent skin.
- Color alone cannot exclude a melanocytic or malignant polypoid lesion.

Anatomy of a stalked skin tag

1. Benign squamous covering

Outer layer of non-atypical stratified squamous epithelium.

2. Fibrovascular head

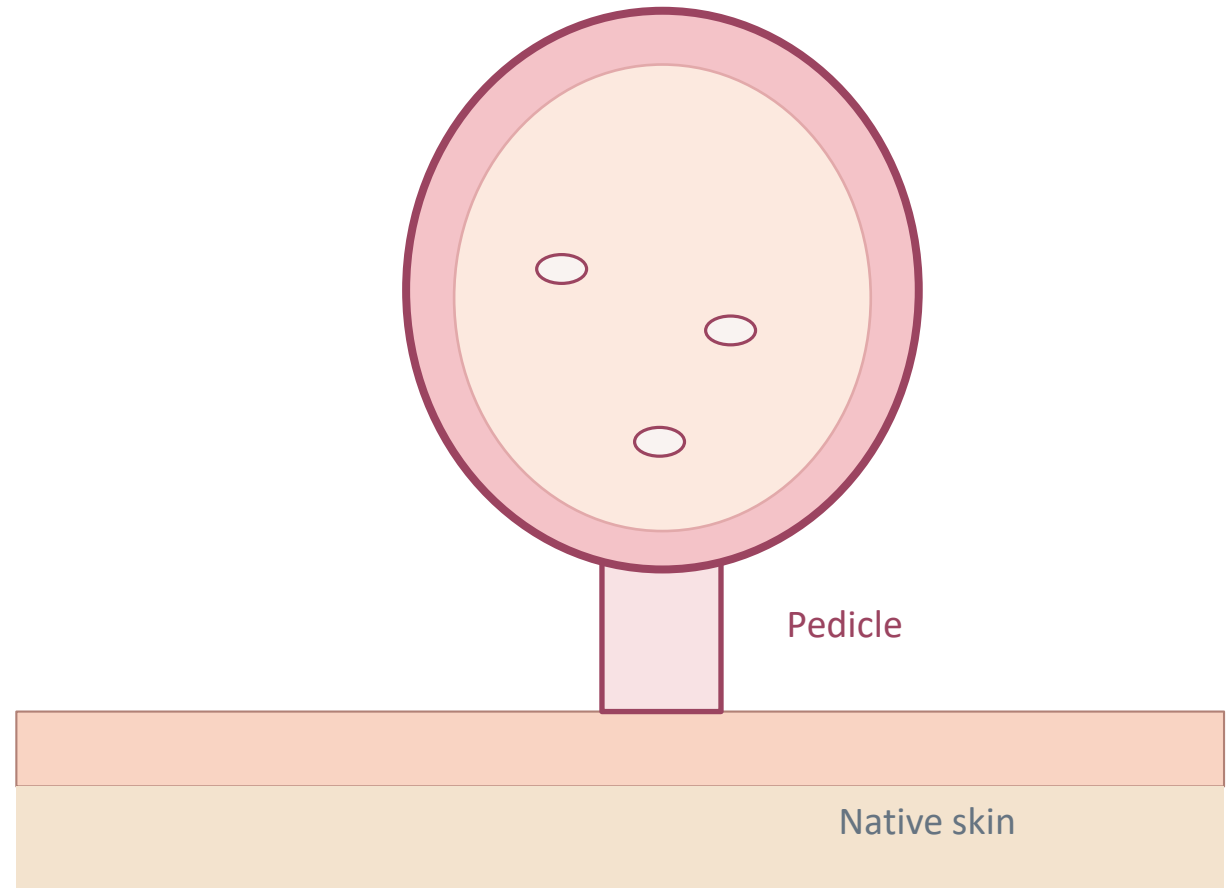
Loose collagen and small blood vessels in the polyp.

3. Narrow pedicle

Constricted junction; Susceptible to twisting and ischemia.

4. Surrounding native skin

Underlying epidermis and dermis at the point of origin.



Original schematic

A narrow pedicle matters

- The stalk distinguishes a typical pedunculated tag from many broad-based papules.
- A small connecting stalk can become twisted or traumatically stretched.
- Pedunculation supports—but never proves—the clinical diagnosis.

Solitary versus multiple lesions

- Some patients present with a single troublesome lesion.
- Others have clusters in neck or axillary folds.
- Distribution and number guide history-taking, not a diagnosis of an underlying syndrome.

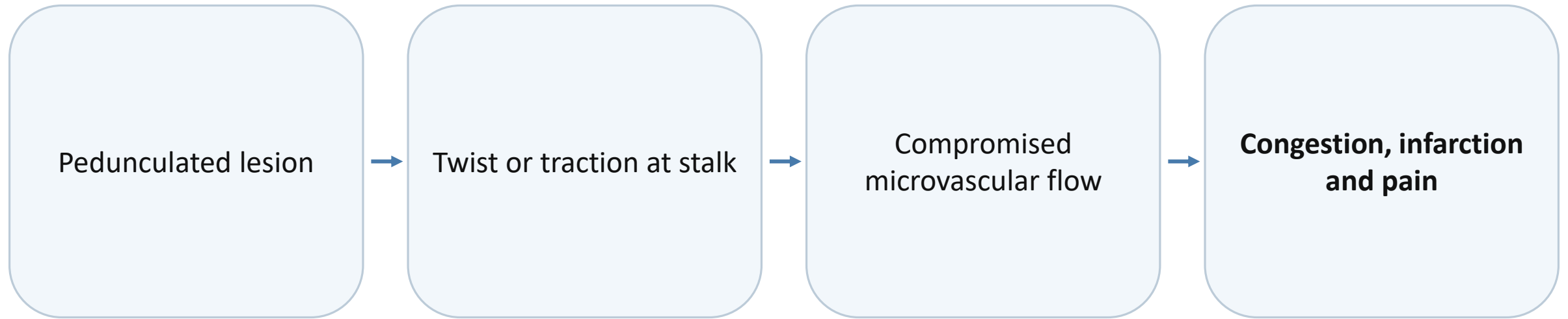
Why an otherwise harmless lesion is noticed

- Friction with clothing or jewellery can produce irritation.
- Location may create cosmetic concern or repetitive snagging.
- New pain or color change often relates to mechanical injury, but requires examination.

Symptoms: Uncomplicated versus complicated

- Uncomplicated acrochordons are often asymptomatic.
- Recurrent friction may cause focal discomfort, itching or minor bleeding.
- Sudden tenderness and dark discoloration suggest possible vascular compromise.

Torsion can lead to ischemic injury



Torsion is a recognized source of pain

- Ischemic necrosis after pedicle torsion.
- An infarcted tag may darken and be acutely tender.
- A black, bleeding or rapidly changing polyp still needs clinical differential assessment.

Clinically concerning departures

- Persistent spontaneous bleeding, atypical pigment or irregular growth pattern.
- A broad firm base, fixation or surface ulceration unexplained by trauma.
- History or examination inconsistent with an otherwise ordinary skin tag.

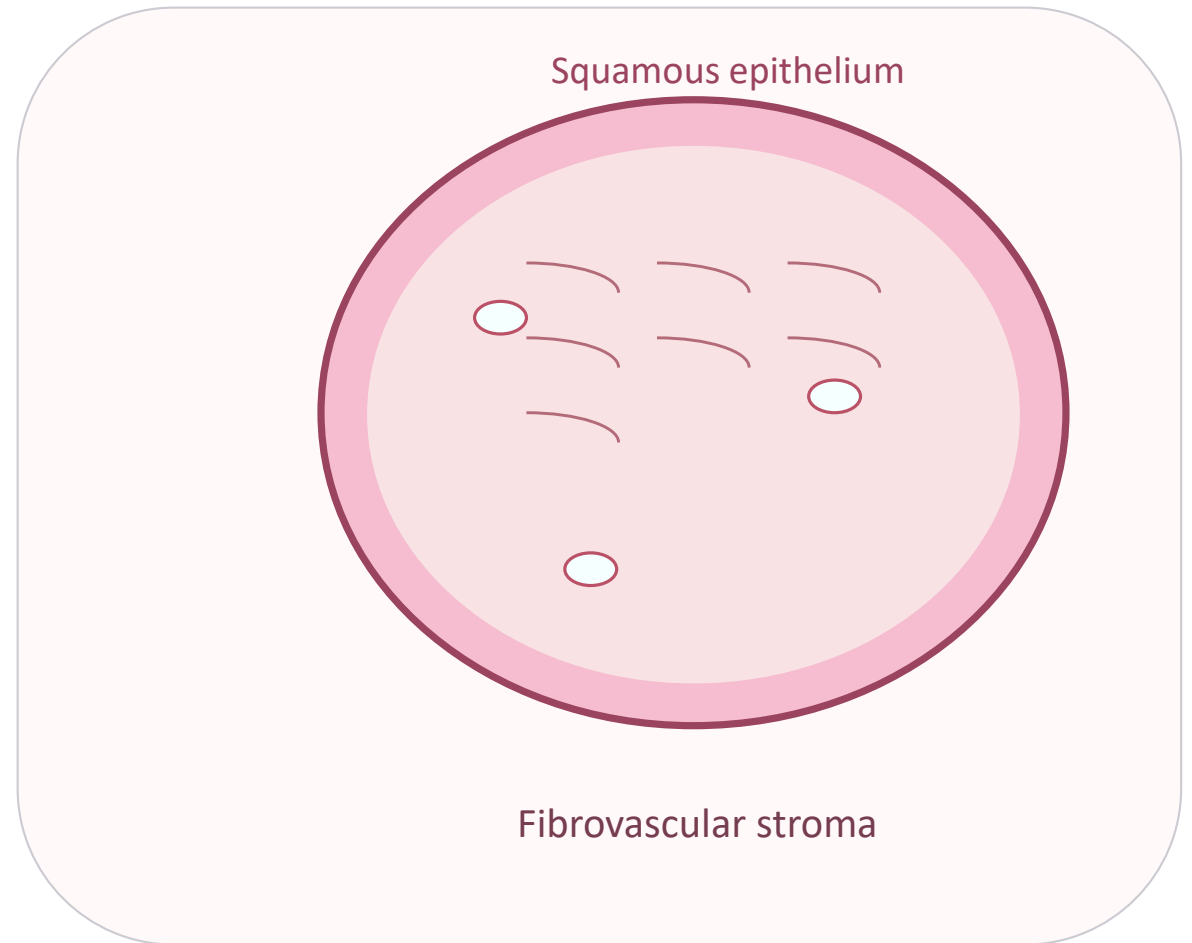
What lies beneath the surface?

Benign epithelial envelope

Loose collagen and connective tissue

Small-caliber blood vessels

No infiltrating tumor front



Original schematic — not an H&E micrograph

Microscopy: Low-power architecture

- Well-circumscribed polypoid exophytic configuration.
- Stromal core is continuous with the underlying superficial dermis.
- The surface is covered by benign stratified squamous epithelium.

Microscopy: The epithelial covering

- Squamous epithelium can be flattened, thickened or papillomatous.
- Keratinization may vary with local friction and site.
- Marked atypia is not a defining feature of ordinary acrochordon.

Microscopy: Stromal collagen

- Loosely arranged collagen predominates in the central core.
- The stroma is often relatively hypocellular.
- Loose collagen helps explain the soft, flexible gross texture.

Microscopy: Vascular component

- Small vessels traverse the connective-tissue core.
- Vascularized stroma underlies the epithelial surface.
- Mechanical twisting of the stalk can compromise these vessels.

Microscopy: Epidermis versus appendages

- The key surface feature is benign squamous epithelial coverage.
- Typical lesions do not require a proliferating adnexal tumor component.
- Follicular epithelial strands suggest a different lesion, particularly fibrofolliculoma.

Gross-to-microscopic correspondence

Soft head

Loose stromal collagen

Slender stalk

Restricted attachment to dermis

Skin-coloured surface

Benign squamous lining

Pain after twisting

Possible stromal ischemia

A lesion is not diagnosed by “fibrous” alone

- The fibrovascular core must be interpreted with the architecture of its covering.
- Bland collagenous stroma also occurs in other polypoid skin lesions.
- Examine the entire clinical–histological pattern before issuing a diagnosis.

Infarction on histology: Interpretation

- If torsion occurs, necrosis and secondary inflammation may obscure the usual pattern.
- A traumatized lesion can become dark, tender or hemorrhagic.
- Adequate sampling is important if the viable lesion remains diagnostically uncertain.

What histology does not usually require

- No molecular test is routine for a clinically and histologically typical skin tag.
- No formal tumor grade or stage is assigned to an uncomplicated benign lesion.
- Immunohistochemistry is not a substitute for recognition of ordinary architecture.

Practical dermatopathology reporting

Site / clinical history

Document when supplied

Architecture

Polypoid skin with benign covering

Stroma

Loose fibrovascular connective tissue

Conclusion

Fibroepithelial polyp (acrochordon)

Pathogenesis: Knowns and unknowns

- The fundamental cause of sporadic skin tags remains incompletely established.
- Mechanical, metabolic and hormonal factors are proposed contributors.
- An observed association must not be treated as proof of a single causal pathway.

Proposed contributing contexts

Local factors

Skin-fold friction / irritation

Host factors

Age, adiposity, insulin resistance

Hormonal milieu

Pregnancy-related prominence

Friction: Plausible, not exclusive

- Tags concentrate in areas where skin surfaces rub.
- Repeated chafing is a plausible local growth-promoting influence.
- Friction does not explain every site or individual lesion.

Age and tissue mechanics

- Acrochordons are more commonly encountered with advancing age.
- Age-related local dermal change has been proposed as a permissive factor.
- The precise sequence from altered dermal support to polyp formation is uncertain.

Pregnancy-related prominence

- Increasing number or prominence during pregnancy.
- Hormonal stimulation is a suggested explanation rather than a proven mechanism.
- The finding is not, by itself, a pathologic pregnancy marker.

Obesity: Epidemiologic association

- Skin tags are more numerous in some patients with obesity.
- Fold distribution and metabolic factors may both contribute.
- No skin tag count provides a validated diagnosis of obesity or metabolic disease.

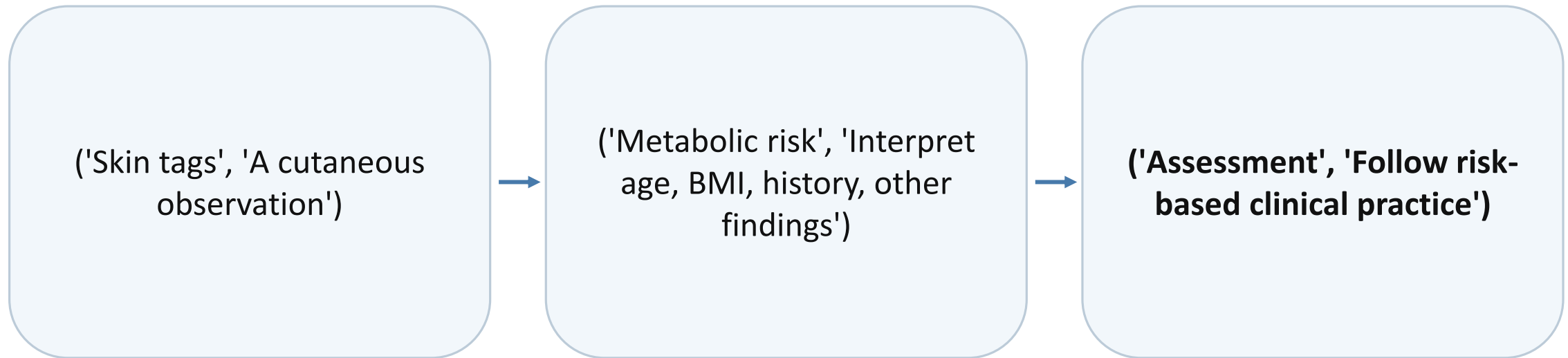
Type 2 diabetes and insulin resistance

- Acrochordons are associated with diabetes and insulin resistance in observational studies.
- This is a risk association, not a diagnostic criterion for diabetes.
- Assess cardiometabolic risk using established clinical standards.

Acanthosis nigricans: A related examination clue

- Velvety hyperpigmented plaques in flexures may coexist with skin tags.
- The concurrent pattern may increase suspicion of insulin resistance.
- Acanthosis nigricans and acrochordons are distinct morphologic processes.

Association is not equivalent to screening indication



Intestinal polyposis: Interpret cautiously

- Robbins mentions an occasional association with intestinal polyposis.
- Ordinary skin tags alone do not establish a polyposis syndrome.
- Use standard colorectal screening indications unless other clinical clues exist.

Viral causation remains uncertain

- HPV DNA has been reported in some studies of skin tags.
- Detection does not establish that HPV causes typical acrochordons.
- The viral wart differential still matters because warts have different morphology.

Birt–Hogg–Dubé syndrome: Relevant but rare

- Occasional co-occurrence with perifollicular mesenchymal tumors.
- Sporadic acrochordons are very common and nonspecific.
- Genetic concern is driven by fibrofolliculomas and associated systemic findings.

Birt–Hogg–Dubé: Distinguish the lesions

Feature	Acrochordon	Fibrofolliculoma
Clinical configuration	Soft, often stalked	Small, dome-shaped papule
Usual pathology	Fibrovascular core	Follicular epithelial strands in fibrous stroma
Syndromic value	Low specificity	Much greater diagnostic relevance

When a syndrome work-up becomes reasonable

- Multiple facial fibrofolliculoma-like papules and compatible family history.
- History of spontaneous pneumothorax or characteristic lung cysts.
- Renal tumors with compatible features warrant genetics-guided evaluation.

BHD mechanism is not skin-tag pathogenesis

- Pathogenic FLCN variants underlie Birt–Hogg–Dubé syndrome.
- That molecular association does not make ordinary skin tags a germline test indication.
- Do not label sporadic acrochordons as “BHD lesions” without supporting context.

Differential diagnosis: Bedside distinctions

Mimic	Features raising alternative	Key distinction
Verruca	Rough keratotic surface	HPV-related epithelial proliferation
Seborrheic keratosis	Waxy, stuck-on plaque	Basaloid epidermal proliferation
Melanocytic nevus	Pigmentation / melanocytic pattern	Nevomelanocytic cells

Common wart versus skin tag

- Warts often have a rough or keratotic surface.
- They are HPV-related epidermal proliferations, unlike a typical soft stromal tag.
- A filiform wart can look stalked; Examine surface texture and clinical context.

Seborrheic keratosis versus skin tag

- Seborrheic keratoses often have a waxy, “stuck-on” surface.
- Their hallmark histology differs: Basaloid proliferation with horn cysts.
- A pedunculated variant can cause clinical ambiguity.

Melanocytic nevus versus skin tag

- Some melanocytic nevi are intradermal and pedunculated.
- Pigment or dermoscopic melanocytic features may be informative.
- Histology demonstrates melanocytic nests/cells rather than only a fibrovascular core.

Neurofibroma versus skin tag

- Soft neurofibromas may resemble skin tags clinically.
- A neural spindle-cell proliferation distinguishes neurofibroma microscopically.
- Numerous neurofibromas require a different systemic assessment.

Basal cell carcinoma can be polypoid

- Rare BCC variants can mimic benign exophytic papules.
- Bleeding, persistent ulceration or clinical atypia warrants tissue diagnosis.
- Microscopic infiltrative/basaloid tumor architecture differs from an acrochordon.

Polypoid melanoma: Avoid diagnostic anchoring

- Pigmented or amelanotic melanoma may form a raised or pedunculated nodule.
- Evolution, atypical appearance, ulceration or suspicious dermoscopy changes the pathway.
- Do not destroy an uncertain lesion without appropriate assessment.

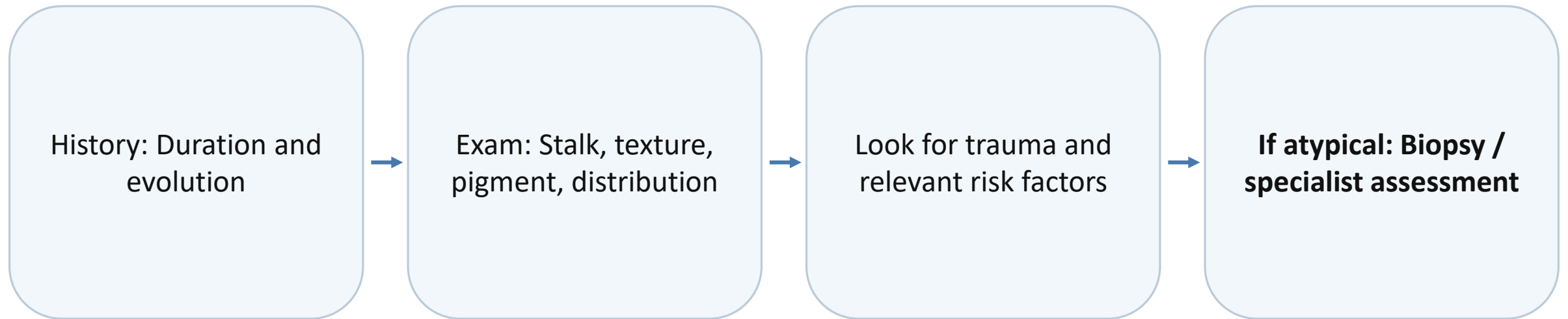
A focused morphology comparison

Characteristic	Acrochordon	Needs differential
Attachment	Often narrow stalk	Broad / irregular / fixed base
Texture	Soft and pliable	Firm, verrucous or ulcerated
History	Long-standing / friction symptoms	Unexplained rapid change or bleeding
Pathology	Bland squamous + fibrovascular core	Atypical cellular or architectural features

Anogenital lesions need contextual diagnosis

- Vulvar and perianal skin tags are often benign.
- Site-specific mimics include condyloma and reactive/inflammatory tags.
- Atypia, ulceration or substantial growth may justify biopsy and a broader differential.

Clinical evaluation in four steps



When clinical diagnosis is sufficient

- Classic small, soft, pedunculated lesion in a usual location.
- Stable course, nonconcerning surface and no discordant history.
- The clinician may diagnose without histology when confident and appropriate.

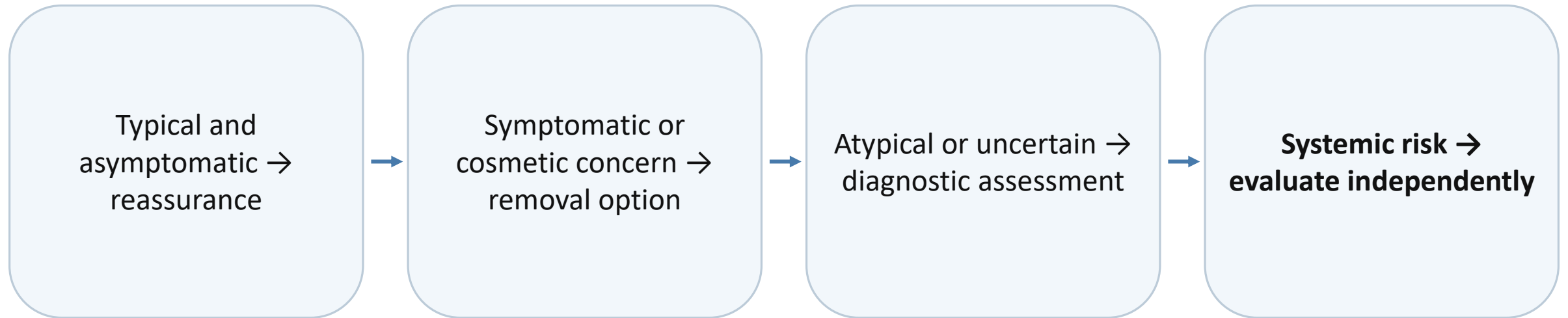
When to obtain histopathology

- Unexpectedly large, atypical, ulcerated, irregularly pigmented or changing lesion.
- Clinical uncertainty between tag and neoplasm.
- Excised tissue should be submitted according to local pathology policy and judgment.

Specimen orientation and sampling

- Record anatomic site, size and clinical concern when provided.
- Examine the head and attachment, especially if there is an unusual solid base.
- Any suspicious focus should be represented adequately in sections.

Management decision pathway



Removal by simple excision

- Clinician-performed snip or shave excision is a common option.
- Local anesthesia and hemostasis are chosen according to size and site.
- Removal addresses the individual lesion; New skin tags can arise later.

Other accepted removal methods

- Cryotherapy, electrosurgery and ligation are described options.
- Choice depends on lesion size, location, patient preference and local expertise.
- When diagnostic uncertainty exists, preserve tissue for pathology rather than destroy it.

Potential procedural complications

- Bleeding and local pain are the principal immediate considerations.
- Scarring, dyschromia or infection can occur after removal.
- Unsupervised home excision risks injury and missed diagnosis.

Patient counselling: Precise reassurance

- A typical acrochordon is benign and does not require treatment.
- Removing one lesion does not eliminate a tendency to form others.
- Seek review for new atypical growth, persistent bleeding or unexplained change.

Case 1 — a typical neck lesion

A 53-year-old presents with several soft skin-coloured outgrowths along the lower neck, intermittently catching on a collar.

Most likely diagnosis and next step?

- Pedunculated
- Long-standing
- Soft
- No suspicious evolution

Case 2 — sudden pain and blackening

A long-standing narrow-stalked axillary tag becomes painful and dusky after repeatedly snagging on clothing.

What explains the acute change, and what must not be overlooked?

- Pedicle torsion possible
- Vascular compromise
- Can infarct
- Examine atypical features

Case 3 — numerous tags and metabolic risk

A 46-year-old with central adiposity has multiple neck and axillary tags and flexural velvety plaques.

What is an appropriate clinicopathologic interpretation?

- Tags are nonspecific
- Risk-factor assessment
- Acanthosis nigricans is distinct
- No diagnostic shortcut

Case 4 — dome-shaped facial papules

A patient has multiple small pale facial papules, past spontaneous pneumothorax and affected relatives.

Why is “multiple skin tags” an inadequate conclusion?

- Follicular papules possible
- Pulmonary feature
- Family history
- BHD differential

Case 5 — an evolving polypoid lesion

A new irregularly pigmented, ulcerated stalked skin lesion is described as a “skin tag” by the patient.

What is the immediate diagnostic priority?

- Patient label not diagnosis
- Evolution / ulceration
- Suspicious pigment
- Histologic confirmation

The pathology pattern in one slide

- Gross: Soft, often skin-coloured polyp with a narrow stalk.
- Microscopy: Bland squamous epithelium enveloping a loose fibrovascular core.
- Torsion can cause infarction; Clinically atypical growth requires a differential.

Clinical synthesis

- Usually benign and inconsequential; Treat for symptoms or cosmetic preference.
- Common associations include age, obesity and diabetes—none are diagnostic alone.
- Multiple isolated tags are not sufficient evidence for a hereditary cancer syndrome.

Core and supplementary references

Primary textbook

Robbins, Cotran & Kumar. Pathologic Basis of Disease. 11th ed. 2026; Ch. 25, pp. 1037–1038.

Morphology and management

DermNet. Skin tag (Acrochordon). <https://dermnetnz.org/topics/skin-tag>

Clinical review

Pandey A, Saleh HM. Skin Tag (Acrochordon). StatPearls. Updated 13 Dec 2025.

Additional clinical references

Syndromic interpretation

Birt–Hogg–Dubé Syndrome. GeneReviews®. NCBI Bookshelf NBK1522.

Clinical practice guidance

ERN GENTURIS. Birt–Hogg–Dubé syndrome guidelines. Eur J Hum Genet. 2024.

Source fidelity

Original uploaded Robbins Markdown; excluded interleaved adnexal-tumor material.