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# VULVAR LICHEN SCLEROSUS: MAINTENANCE THERAPY WITH TOPICAL CORTICOSTEROIDS

# LÍQUEN ESCLEROSO VULVAR: TERAPIA DE MANUTENÇÃO COM CORTICOSTEROIDES TÓPICOS

# LIQUEN ESCLEROSO VULVAR: TERAPIA DE MANTENIMIENTO CON CORTICOSTEROIDES TÓPICOS

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## ABSTRACT

Vulvar lichen sclerosus is a chronic inflammatory dermatosis that can cause pruritus, pain, sexual dysfunction, progressive architectural loss, and vulvar squamous cell carcinoma. Potent or ultrapotent topical corticosteroids are the standard initial treatment, but the central long-term question is how remission should be maintained after active inflammation has been controlled. This narrative review examines the rationale, evidence, practical regimens, safety, adherence, and surveillance requirements of maintenance corticosteroid therapy. Randomized trials show that proactive twice-weekly mometasone furoate can prevent relapse more effectively than emollient or vitamin E alone and that clobetasol propionate and mometasone furoate can both sustain remission when used twice weekly. Large prospective cohort data further associate individualized preventive treatment, adherence, and regular follow-up with better symptom control, less scarring, and fewer neoplastic outcomes. The evidence does not support stopping anti-inflammatory treatment solely because symptoms have improved: clinical activity may persist silently, while established scarring is often irreversible. A practical strategy is to induce objective remission, then prescribe the least frequent and least potent regimen that keeps skin color, texture, and symptoms controlled, commonly one or two applications weekly, with temporary escalation during flares. Correct application, a written plan, emollient care, examination at three months, and lifelong self-surveillance are essential. Persistent hyperkeratosis, erosion, ulceration, induration, a new papule or nodule, pigment change, or inadequate response requires biopsy or specialist assessment. Long-term topical corticosteroid therapy is generally well tolerated when

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directed to affected skin and reviewed periodically. Maintenance treatment should therefore be framed as preventive disease control rather than intermittent relief of itch.

**Keywords:** Vulvar Lichen Sclerosus. Topical Corticosteroids. Clobetasol Propionate. Mometasone Furoate. Maintenance Therapy. Vulvar Squamous Cell Carcinoma.

**RESUMO**

Líquen escleroso vulvar é uma dermatose inflamatória crônica que pode causar prurido, dor, disfunção sexual, perda arquitetônica progressiva e carcinoma espinocelular vulvar. Corticosteroides tópicos potentes ou ultrapotentes são o tratamento inicial padrão, mas a questão central a longo prazo é como a remissão deve ser mantida após o controle da inflamação ativa. Esta revisão narrativa examina a fundamentação lógica, as evidências, os regimes práticos, a segurança, a adesão e os requisitos de vigilância da terapia de manutenção com corticosteroides. Ensaios randomizados mostram que o propionato de mometasona aplicado proativamente duas vezes por semana pode prevenir recidivas mais efetivamente do que emoliente ou vitamina E isolados, e que o propionato de clobetasol e o propionato de mometasona podem manter a remissão quando usados duas vezes por semana. Grandes dados de coorte prospectivo associam ainda o tratamento preventivo individualizado, a adesão e o acompanhamento regular com melhor controle dos sintomas, menos cicatrização e menos desfechos neoplásicos. As evidências não apoiam a interrupção do tratamento anti-inflamatório apenas porque os sintomas melhoraram: a atividade clínica pode persistir silenciosamente, enquanto a cicatrização estabelecida é frequentemente irreversível. Uma estratégia prática é induzir remissão objetiva, então prescrever o regime menos frequente e menos potente que mantém a cor, textura e sintomas da pele controlados, comumente uma ou duas aplicações por semana, com escalação temporária durante exacerbações. Aplicação correta, um plano escrito, cuidados com emolientes, exame aos três meses e auto-vigilância vitalícia são essenciais. Hiperceratose persistente, erosão, ulceração, endurecimento, um papule ou nódulo novo, mudança de pigmentação ou resposta inadequada requerem biópsia ou avaliação especializada. A terapia com corticosteroides tópicos de longo prazo é geralmente bem tolerada quando direcionada à pele afetada e revisada periodicamente. O tratamento de manutenção deve, portanto, ser enquadrado como controle preventivo da doença em vez de alívio intermitente da coceira.

**Palavras-chave:** Líquen Escleroso Vulvar. Corticosteroides Tópicos. Propionato de Clobetasol. Propionato de Mometasona. Terapia de Manutenção. Carcinoma Espinocelular Vulvar.

**RESUMEN**

El liquen escleroso vulvar es una dermatosis inflamatoria crónica que puede causar prurito, dolor, disfunción sexual, pérdida arquitectónica progresiva y carcinoma de células escamosas vulvares. Los corticosteroides tópicos potentes o ultrapotentes son el tratamiento inicial estándar, pero la pregunta central a largo plazo es cómo se debe mantener la remisión después de que la inflamación activa ha sido controlada. Esta revisión narrativa examina la justificación, la evidencia, los regímenes prácticos, la seguridad, la adherencia y los requisitos de vigilancia de la terapia de mantenimiento con corticosteroides. Los ensayos aleatorizados muestran que el propionato de mometasona aplicado de manera proactiva dos veces por semana puede prevenir las recaídas más efectivamente que el emoliente o la vitamina E solos, y que el propionato de clobetasol y el propionato de mometasona pueden mantener la remisión cuando se usan dos veces por semana. Grandes datos de cohortes prospectivas asocian además el tratamiento preventivo individualizado, la adherencia y el

seguimiento regular con mejor control de los síntomas, menos cicatrización y menos resultados neoplásicos. La evidencia no respalda la interrupción del tratamiento antiinflamatorio simplemente porque los síntomas han mejorado: la actividad clínica puede persistir silenciosamente, mientras que la cicatrización establecida es frecuentemente irreversible. Una estrategia práctica es inducir remisión objetiva, luego prescribir el régimen menos frecuente y menos potente que mantenga controlados el color, la textura y los síntomas de la piel, comúnmente una o dos aplicaciones por semana, con escalada temporal durante las exacerbaciones. La aplicación correcta, un plan escrito, cuidados emolientes, examen a los tres meses y autovigilancia de por vida son esenciales. La hiperqueratosis persistente, erosión, ulceración, endurecimiento, una pápula o nódulo nuevo, cambio de pigmentación o respuesta inadecuada requieren biopsia o evaluación especializada. La terapia con corticosteroides tópicos a largo plazo es generalmente bien tolerada cuando se dirige a la piel afectada y se revisa periódicamente. El tratamiento de mantenimiento debe, por lo tanto, ser enmarcado como control preventivo de la enfermedad en lugar de alivio intermitente del prurito.

**Palabras clave:** Liquen Escleroso Vulvar. Corticosteroides Tópicos. Propionato de Clobetasol. Propionato de Mometasona. Terapia de Mantenimiento. Carcinoma de Células Escamosas Vulvares.

## 1 INTRODUCTION

Vulvar lichen sclerosus (VLS) is a chronic inflammatory and sclerosing disorder that most often affects the labia minora, clitoral hood, perineum, and perianal skin. Typical findings include pallor, a thin or crinkled surface, fissures, purpura, erosions, hyperkeratosis, and progressive fusion or resorption of vulvar structures. Pruritus is common, but burning, dyspareunia, dysuria, tearing, and asymptomatic disease also occur. Its clinical importance extends beyond discomfort: untreated or incompletely controlled inflammation can lead to clitoral phimosis, introital narrowing, sexual dysfunction, urinary symptoms, and a persistent risk of differentiated vulvar intraepithelial neoplasia and squamous cell carcinoma. Current European, British, and national guidance therefore treats VLS as a long-term disease requiring active control and continuing surveillance.[1–3,22]

The introduction of potent and ultrapotent topical corticosteroids transformed prognosis. A structured course of clobetasol propionate 0.05% ointment, or an equivalent potent preparation such as mometasone furoate 0.1%, relieves symptoms and suppresses inflammatory signs in most patients.[2,7,8] Initial response, however, is not synonymous with cure. Relapse is frequent after withdrawal, subjective comfort may precede objective normalization, and scarred anatomy rarely returns completely to baseline. Consequently, the clinically decisive question is no longer whether corticosteroids work, but how to preserve control without undertreating disease or creating avoidable adverse effects.

Maintenance therapy may be reactive, with treatment restarted only when symptoms recur, or proactive, with scheduled applications to previously affected areas after remission. Proactive treatment is biologically coherent because it suppresses subclinical inflammation before symptoms and tissue injury reappear. Randomized maintenance studies and long-term cohort observations support this concept, although the optimal potency, frequency, duration, and monitoring schedule have not been defined by large multicenter trials.[4–6] Practice must therefore combine trial evidence, guideline recommendations, objective examination, and individualized titration.

Long-term prescribing also requires careful communication. Many patients receive contradictory messages: an ultrapotent corticosteroid is initially prescribed, yet the same patient may be warned that chronic application will inevitably thin vulvar skin. This fear promotes underuse, imprecise application, and repeated cycles of relapse. The vulva affected by VLS does not behave like normal facial or intertriginous skin, and controlled use of an ointment on the disease field is different from indiscriminate use on unaffected tissue. A

maintenance plan must make that distinction explicit and must link dose to a visible therapeutic target.

## 2 OBJECTIVE

To review the clinical basis and evidence for maintenance topical corticosteroid therapy in VLS and to propose a practical approach to induction, transition to maintenance, dose titration, safety monitoring, adherence, biopsy, and long-term follow-up.

## 3 METHODS

A structured narrative review was conducted using clinical guidelines, randomized and comparative trials, prospective and retrospective cohorts, systematic reviews, and clinically relevant pharmacokinetic and adherence studies available through September 2026. Searches emphasized vulvar lichen sclerosus, topical corticosteroid, clobetasol, mometasone, maintenance, relapse, adherence, follow-up, and vulvar cancer. Priority was given to EuroGuiDerm and British Association of Dermatologists guidance, direct comparisons of maintenance regimens, and longitudinal studies linking treatment adherence with architecture or neoplasia. Because treatment schedules, disease-severity measures, and follow-up periods were heterogeneous, no pooled effect estimate was attempted. Recommendations below identify where evidence is supported by controlled data and where it reflects convergent observational evidence or expert practice.

## 4 RESULTS AND DISCUSSION

### 4.1 DIAGNOSIS, ACTIVITY, AND THERAPEUTIC TARGETS

The diagnosis is usually clinical when the distribution and morphology are characteristic. A careful examination should document active features—erythema, purpura, fissuring, erosion, hyperkeratosis, and symptomatic tenderness—as well as irreversible structural change, including labial resorption, adhesions, clitoral hood fusion, and introital narrowing. A diagram or standardized photograph, with consent, improves longitudinal comparison. Symptoms alone are insufficient because some patients with active disease report little itch, while persistent pain after inflammatory control may reflect pelvic-floor dysfunction, vulvodynia, genitourinary syndrome of menopause, neuropathic pain, infection, or established scar.[1–3]

Biopsy is not mandatory for every classic presentation, but it is appropriate when diagnosis is uncertain, first-line therapy fails despite verified use, or neoplasia is suspected. The highest-yield specimen is taken from an active sclerotic or hyperkeratotic area rather than the center of a nonspecific erosion. Persistent erosion or ulceration, a new papule or nodule, induration, focal hyperkeratosis, color change, bleeding, or a lesion that differs from the surrounding disease should prompt biopsy. A recent corticosteroid application can reduce histologic inflammation; this does not justify delaying evaluation of a lesion suspicious for cancer.

The therapeutic target should be objective disease control, not symptom reduction alone. Normal or near-normal texture and color, absence of fissuring, purpura, hyperkeratosis, and erosions, and prevention of further architectural loss are useful targets.[4] Pallor may persist despite adequate control, and established scarring should not be interpreted as ongoing treatment failure. Conversely, absence of pruritus does not prove remission. This distinction determines whether a patient can step down to maintenance or still requires an induction-level regimen.

## 4.2 WHY MAINTENANCE THERAPY IS NECESSARY

VLS has a chronic, relapsing course. In a prospective study of women treated to clinical and histologic remission with a potent corticosteroid, complete remission was achieved in only a minority and recurrence remained common over long-term follow-up.[10] Other large clinical series likewise show that ultrapotent therapy controls symptoms more consistently than it fully reverses all signs.[11] The practical implication is that a finite induction course should be viewed as the beginning of disease control, not the end of care.

Maintenance has three related goals. First, it prevents symptomatic flares and the fissuring or secondary infection that may accompany them. Second, it limits cumulative inflammation and scarring, preserving clitoral mobility, introital caliber, and sexual function. Third, sustained suppression may reduce the inflammatory environment in which differentiated vulvar intraepithelial neoplasia and squamous cell carcinoma arise. The cancer-prevention claim cannot be established by randomized trials of sufficient duration, but long-term observational evidence is clinically persuasive and consistent with disease biology.[4,12,18]

A prospective cohort of 507 women used individualized topical corticosteroid treatment to achieve and maintain normal skin color and texture. Patients classified as compliant had substantially better symptom control and less progression of scarring; no vulvar carcinoma

or intraepithelial neoplasia occurred in the compliant group during follow-up, compared with events among partially compliant patients.[4] This single-center, nonrandomized design cannot eliminate adherence-related confounding, but the magnitude and coherence of the findings support preventive therapy rather than symptom-triggered treatment alone.

Maintenance should not be confused with an unchanging lifelong dose. It is a strategy of planned suppression and review. A patient with mild, stable disease may remain controlled with one application weekly of a potent ointment, whereas another patient requires twice-weekly clobetasol or a stronger temporary schedule. The relevant outcome is durable control with the lowest effective exposure—not reaching an arbitrary minimum frequency while activity remains visible.

**Table 1**

*Key evidence supporting maintenance topical corticosteroid therapy in vulvar lichen sclerosus*

| Study | Design and regimen | Principal finding | Clinical meaning |
|---|---|---|---|
| Virgili et al.[5] | Randomized maintenance study after 12-week mometasone induction; twice-weekly mometasone vs daily vitamin E or cold cream for 52 weeks | No relapse in the proactive corticosteroid group; relapses occurred in both nonsteroidal groups | Scheduled anti-inflammatory maintenance is superior to barrier care alone for relapse prevention |
| Corazza et al.[6] | Comparative 52-week trial of twice-weekly clobetasol 0.05% vs mometasone 0.1% | Both agents maintained remission with low relapse and acceptable tolerability | Either an ultrapotent or potent agent may be used when it reliably controls disease |
| Lee et al.[4] | Prospective cohort of 507 women; individualized preventive corticosteroid titrated to normal texture and color | Adherence associated with better symptom control, less scarring, and fewer neoplastic outcomes | Maintenance should target objective control and be reinforced at regular review |
| Bradford and Fischer[12] | Long-term specialist cohort with individualized potent corticosteroid use | Sustained control was achievable with low treatment toxicity | Long-term therapy is feasible when potency and frequency are adjusted |

The maintenance trials were modest in size, and the neoplasia findings are observational. They support a strategy of proactive, monitored treatment rather than a single universal dose.
Source: Prepared by the authors.

## 4.3 EVIDENCE FOR PROACTIVE CORTICOSTEROID MAINTENANCE

The most direct evidence comes from a randomized maintenance study in which women first received daily mometasone furoate 0.1% ointment for 12 weeks. Those achieving remission were allocated to mometasone twice weekly, daily cold cream, or daily vitamin E

for one year. Relapse occurred in the emollient and vitamin E groups but in none of the patients assigned to proactive mometasone.[5] The sample was small, yet the randomized design and clinically relevant endpoint support scheduled anti-inflammatory therapy over emollient-only maintenance.

A separate randomized study comparing vitamin E with an emollient after corticosteroid induction found similar relapse prevention between the two nonsteroidal approaches.[9] These products remain useful for comfort, barrier support, and reduction of irritant exposure, but they do not replace the anti-inflammatory effect of a maintenance corticosteroid. The two trials together clarify an important point: an emollient may support care, whereas proactive corticosteroid application changes relapse risk.

A comparative 52-week maintenance trial evaluated twice-weekly clobetasol propionate 0.05% and mometasone furoate 0.1% in patients who had responded to those agents during induction. Both regimens maintained remission with low relapse rates and acceptable tolerability.[6] This supports a class principle rather than a unique effect of one molecule. Clobetasol remains the most established ultrapotent agent, but mometasone is a reasonable potent alternative when it has achieved control and fits patient preference, availability, or tolerability.

Induction trials also inform the transition to maintenance. Clobetasol and mometasone produced comparable improvement in a randomized 12-week study using tapering schedules.[7] Another randomized trial found that a continuous five-days-per-week mometasone regimen and a tapering regimen achieved similar short-term efficacy and adherence.[8] These data indicate that several schedules can suppress active disease, provided adequate quantity reaches the correct skin and review confirms response. They do not establish that induction-level treatment should continue indefinitely.

No trial has identified one maintenance frequency for every phenotype. Twice-weekly application has the clearest randomized support, but individualized regimens ranging from one to three applications weekly are used in specialist practice, with temporary daily escalation during recurrence.[1,2,4,12] Patients with ongoing signs on twice-weekly treatment should not be labeled steroid dependent; they may have inadequate application, an alternative diagnosis, superimposed infection or contact dermatitis, neoplasia, or genuinely more active disease requiring reassessment.

### 4.4 FROM INDUCTION TO A PRACTICAL MAINTENANCE PLAN

A commonly used adult induction schedule for clobetasol propionate 0.05% ointment is once daily for four weeks, on alternate days for four weeks, and twice weekly for four weeks, followed by examination.[2] Some guidelines and clinicians use once-daily treatment for up to three months before stepping down. Either approach is defensible when response is monitored. Severe hyperkeratosis, marked inflammation, extensive disease, or poor initial delivery may require a longer daily phase; mild disease may respond to a potent rather than ultrapotent preparation.

At the three-month review, the clinician should verify the diagnosis, map residual activity, examine architecture, and ask the patient to demonstrate where and how the ointment is applied. If control is objective, treatment can transition to a scheduled maintenance dose, commonly clobetasol 0.05% or mometasone 0.1% once or twice weekly. If activity persists, the appropriate response is usually to correct technique and continue or intensify treatment rather than to reduce frequency because twelve weeks have elapsed.

Application instructions should be concrete. Ointment is generally preferred to cream because it contains fewer potential irritants and remains in contact with the skin. A thin film is applied to the entire involved field, not only the most pruritic point. Patients should know the anatomic boundaries, whether perianal skin is included, and which adjacent hair-bearing or fold areas should be avoided unless involved. A fingertip-unit explanation, mirror-assisted demonstration, or diagram often prevents both undertreatment and waste.

A flare plan prevents delay. New itch, soreness, fissuring, or visible inflammatory change can be treated by returning temporarily to the last effective induction frequency, often daily application, until controlled; the patient then tapers back to the maintenance schedule. Failure to improve within the agreed interval, usually two to four weeks, warrants examination. A persistent focal lesion should not be repeatedly treated as a flare without considering biopsy.

Adjunctive vulvar care includes a bland emollient or barrier ointment, avoidance of fragranced cleansers and wet wipes, gentle drying, management of urine or fecal irritation, and treatment of constipation or incontinence. Lubricants and moisturizers may help sexual activity, and local vaginal estrogen can be prescribed for coexisting genitourinary syndrome of menopause; estrogen is not a treatment for VLS itself. Dilator therapy, pelvic-floor physiotherapy, or surgery may be needed for functional stenosis or adhesions after inflammation is controlled.

**Table 2**

*Practical transition from active treatment to maintenance*

| Phase | Typical approach | What to assess | Action if control is incomplete |
|---|---|---|---|
| Induction | Clobetasol 0.05% ointment daily with a staged taper over 12 weeks, or an evidence-based potent alternative | Symptoms, erythema, purpura, fissures, erosion, hyperkeratosis, texture, and architecture | Verify location and quantity; continue or intensify treatment; reconsider diagnosis or biopsy focal lesions |
| Early maintenance | One or two fixed applications weekly to the full disease field | Objective remission, correct technique, tube use, adverse effects, sexual and urinary function | Return temporarily to the last effective frequency and arrange earlier review |
| Stable maintenance | Lowest frequency and potency that preserve objective control; emollient on other days | Annual full examination, self-examination, adherence, new focal change | Escalate for a defined interval; biopsy persistent hyperkeratosis, erosion, ulcer, induration, or mass |
| Post-cancer or complex disease | Specialist-directed potent corticosteroid plus oncologic surveillance | Recurrence, differentiated vulvar intraepithelial neoplasia, scarring, functional impairment | Urgent specialist assessment and targeted biopsy |

Regimens are examples, not substitutes for examination. The dose should be titrated to disease activity and patient factors.[1,2,4]
Source: Prepared by the authors.

## 4.5 SAFETY OF LONG-TERM TOPICAL CORTICOSTEROIDS

The adverse effects commonly associated with topical corticosteroids—epidermal or dermal atrophy, telangiectasia, striae, secondary infection, and systemic absorption—are legitimate pharmacologic considerations, but their probability depends on potency, site, quantity, frequency, disease state, and duration. Long-term VLS cohorts and proactive maintenance trials report few clinically important treatment-related adverse effects when patients use small quantities on affected skin and attend follow-up.[4–6,12] In contrast, undertreatment carries documented risks of pain, scarring, and possibly neoplasia.

The term atrophy is particularly confusing because VLS itself causes thin, fragile-appearing skin and loss of vulvar architecture. Disease progression may therefore be incorrectly attributed to corticosteroid damage. True treatment-related change is suggested by new telangiectasia, erythema, fragility, or atrophy arising in previously unaffected adjacent skin, especially folds or hair-bearing areas exposed unintentionally. Serial examination helps distinguish these patterns.

Systemic adverse effects are unlikely with the quantities usually required for adult vulvar maintenance, but caution is appropriate with very extensive disease, occlusion, unusually high use, childhood treatment, or other concurrent potent corticosteroids. Tube use

is a practical safety and adherence measure. A 30-g tube should generally last many weeks to months in maintenance; rapid depletion may indicate excessive area or quantity, whereas an almost full tube at follow-up may reveal nonuse. Pharmacokinetic reviews support rational dosing but also emphasize that direct vulvar absorption data are limited.[13]

Topical calcineurin inhibitors can be considered when a corticosteroid is not tolerated or when a specialist identifies a specific indication. Randomized comparisons show that clobetasol controls objective disease more effectively than tacrolimus or pimecrolimus, and burning is common with calcineurin inhibitors.[14],[15] They should therefore be alternatives rather than routine first-line maintenance. Laser, photodynamic therapy, platelet-rich plasma, and other regenerative interventions should not displace adequately dosed corticosteroids outside research settings.

## 4.6 ADHERENCE AND COMMUNICATION

Nonadherence is rarely explained by a single factor. Patients may fear skin thinning or cancer, misunderstand maintenance as optional, dislike texture, forget intermittent doses, lack privacy, be unable to see the treatment area, or stop once itch improves. Clinicians contribute when prescriptions say only ‘use sparingly,’ when anatomic instructions are absent, or when follow-up is not arranged. Objective monitoring studies show that self-reported adherence may overestimate actual use.[16],[17]

A written plan should state the product, strength, exact frequency, application field, expected tube duration, response target, flare instructions, and follow-up date. Linking scheduled doses to fixed days reduces errors. The message should be balanced: use enough medication to control disease, keep it on affected skin, and attend review so potency and frequency can be adjusted. The patient should understand that maintenance prevents recurrence and scarring even when no itch is present.

Corticosteroid phobia deserves direct exploration rather than reassurance alone. A prospective study found variable levels of concern among women with VLS, although measured fear did not necessarily predict adherence or outcome in that cohort.[17] Asking what the patient believes the medication might do is more useful than assuming resistance. Demonstrating the intended quantity, explaining the difference between diseased and normal skin, and showing objective improvement can convert an abstract warning into a monitored risk-benefit decision.

Quality of life should be assessed explicitly. Painful sex, altered genital appearance, fear of cancer, and repeated examinations may persist even with good inflammatory control. Sexual inactivity should not be interpreted as absence of sexual concerns. Referral for psychosexual care, pelvic-floor therapy, or surgery should be based on the patient's goals, not merely the clinician's impression of anatomy. A retrospective cohort found that treatment and specialty attention to sexual function were associated with meaningful recovery for some previously inactive patients.[16]

## 4.7 SURVEILLANCE, BIOPSY, AND CANCER PREVENTION

The absolute risk of anogenital squamous cell carcinoma in LS varies across cohorts, reflecting differences in age, site, treatment, diagnostic criteria, and follow-up. A systematic review confirmed increased risk and identified older age, long disease duration, vulvar intraepithelial neoplasia, delayed diagnosis, and partial treatment compliance as relevant factors.[18] This risk is not eliminated by successful treatment, so maintenance and surveillance are complementary rather than competing strategies.

A practical follow-up schedule is review after induction at approximately three months, another review after dose stabilization, and at least annual assessment for stable uncomplicated disease. Shorter intervals are appropriate for difficult control, prior differentiated vulvar intraepithelial neoplasia or cancer, uncertain self-examination, significant scarring, childhood-onset disease transitioning to adult care, or lesions under observation. Specialist follow-up is particularly important when symptoms and signs do not align or surgery is being considered.[1,2,19]

At every visit, the clinician should inspect the entire vulva and perianal region, compare architecture, assess treatment use, and look for focal change. The patient should be taught monthly self-examination with a mirror and instructed to seek prompt review for a sore, lump, thickened area, ulcer, bleeding, or change that persists. Self-examination does not transfer responsibility away from clinical follow-up; it shortens the interval between lesion development and assessment.

Observational studies after treatment of VLS-associated vulvar carcinoma also suggest that ongoing high-potency corticosteroid use may reduce local recurrence.[20,21] These data remain nonrandomized and should not be presented as proof of chemoprevention. Nevertheless, they reinforce the principle that removal of a cancer does not remove the

inflammatory field disease and that treatment of surrounding VLS should continue under gynecologic oncology and vulvar-specialist supervision.

**Table 3**

*Findings that require biopsy or expedited specialist review*

| Finding | Main concern | Recommended response |
|---|---|---|
| Persistent erosion or ulcer | Differentiated vulvar intraepithelial neoplasia, invasive carcinoma, erosive lichen planus, infection | Examine promptly; biopsy an appropriate edge or adjacent abnormal epithelium |
| New focal hyperkeratosis, papule, nodule, or induration | Neoplasia or steroid-resistant alternative diagnosis | Targeted biopsy rather than repeated empirical escalation |
| Pigment change or lesion unlike surrounding VLS | Melanocytic lesion, post-inflammatory change, neoplasia | Dermoscopic or specialist assessment and biopsy when indicated |
| Failure of adequate first-line therapy | Incorrect application, nonadherence, contact dermatitis, infection, alternative diagnosis, neoplasia | Observe application, quantify use, review differential, and biopsy if unresolved |
| Progressive scarring despite reported adherence | Persistently active disease or inaccurate baseline assessment | Early vulvar-specialist review; document architecture and reconsider treatment intensity |

Biopsy is directed by the clinical question and should not be delayed when malignancy is suspected.[1–3,19]
Source: Prepared by the authors.

## 4.8 SPECIAL POPULATIONS AND TREATMENT FAILURE

In children, potent or ultrapotent topical corticosteroids remain first-line treatment, but caregivers need precise dosing, growth-appropriate review, and a plan for long-term monitoring. Puberty does not reliably cure juvenile VLS; continued assessment is required because symptoms may lessen while architecture remains abnormal. Treatment decisions during pregnancy are individualized, but uncontrolled genital inflammation and fissuring are not benign, and maintenance should not be stopped automatically.[1,3]

Apparent corticosteroid failure should trigger a structured review: confirm diagnosis; inspect the exact application site; quantify use; assess contact allergy or irritant exposure; culture or test for infection when indicated; consider lichen planus, psoriasis, vitiligo, mucous membrane pemphigoid, vulvar intraepithelial neoplasia, or neuropathic pain; and biopsy persistent atypical areas. Potent therapy should not be escalated indefinitely without resolving these questions.

Surgery treats consequences such as clitoral phimosis, labial adhesions, introital narrowing, or cancer; it does not cure the inflammatory tendency. Disease should be

controlled before elective reconstructive procedures when feasible, and maintenance therapy should continue afterward to reduce recurrent scarring. Multidisciplinary care may involve dermatology, gynecology, pathology, pelvic-floor physiotherapy, sexual medicine, urology, and oncology.

### 4.9 EVIDENCE LIMITATIONS AND RESEARCH PRIORITIES

The maintenance evidence base is clinically coherent but smaller than the certainty of current practice might suggest. Trials include modest numbers, often arise from specialist centers, and use different scores for response and relapse. Comparative data beyond one year are limited, while cancer prevention cannot realistically be tested in short randomized trials. Long-term cohort evidence is vulnerable to healthy-adherer effects and differences in follow-up intensity.

Future studies should use validated activity and damage measures, record exact potency and quantity, separate symptomatic from objective relapse, and report sexual function, architectural progression, treatment-related adverse effects, and neoplasia. Pragmatic comparisons of once-weekly versus twice-weekly regimens, fixed versus disease-activity–guided dosing, and specialist versus shared-care follow-up would answer common clinical questions. Patient-reported barriers and digital adherence support should be built into these trials.

Until stronger comparative data are available, the best-supported approach is to achieve objective remission, use proactive maintenance, and titrate against examination rather than symptoms alone. This avoids both extremes: indefinite high-frequency treatment without review and premature withdrawal that permits silent inflammatory damage.

## 5 CONCLUSION

Maintenance topical corticosteroid therapy is a central component of VLS management. Randomized evidence supports proactive twice-weekly treatment after remission, and long-term observational evidence links individualized preventive therapy and adherence with symptom control, preservation of architecture, and fewer neoplastic outcomes. Clobetasol propionate 0.05% and mometasone furoate 0.1% are both supported options; potency and frequency should be adjusted to objective disease activity.

Safe maintenance requires more than renewing a prescription. Patients need an anatomic demonstration, an explicit quantity and schedule, a flare plan, emollient care, early

reassessment, and lifelong surveillance. Persistent focal change or inadequate response requires diagnostic reconsideration and often biopsy. When these safeguards are present, the risk of undertreated disease generally exceeds the risk of correctly used long-term topical corticosteroid therapy.

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