

Endoscopic Imaging of Esophageal Lichen Planus



A Behrens, Dr. Horst Schmidt Kliniken, Wiesbaden, Germany

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Received 7 September 2012; Revision submitted 7 September 2012; Accepted 6 November 2012

Abstract

Lichen planus is an inflammatory mucocutaneous disease of unknown pathogenesis with a prevalence of 0.5–2%. Most patients are middle-aged or elderly women. Esophageal involvement seems to be high (50%), but the great majority of patients do not show any symptoms. Endoscopic findings include lacy white papules or submucosal plaques, peeling tissue paper-like pseudomembranes, hyperemic lesions, erosive changes, ulceration, and stenosis. Owing to missing data there are no evidence-based therapeutic recommendations. Probatory therapeutic regimes with use of acute flares of systemic corticosteroids, immunosuppressants, rituximab, and topical corticosteroids have shown positive effects. In case of esophageal stenosis, bougienage is required. Malignant transformation has been reported in rare cases. This article is part of an expert video encyclopedia.

Keywords

Esophagus; Lichen planus; Standard endoscopy; Video.

Video Related to this Article

Video available to view or download at [doi:10.1016/S2212-0971\(13\)70016-5](https://doi.org/10.1016/S2212-0971(13)70016-5)

Materials

- Endoscope: EG-590WR; Fujifilm Inc., Saitama, Japan.
- Spraying catheter: PW5L; Olympus, Hamburg, Germany.
- Solution: Lugol's dye chromoendoscopy, 2%; Dr. Horst Schmidt Kliniken pharmacy, Wiesbaden, Germany.

Background and Endoscopic Procedures

Lichen planus is an inflammatory mucocutaneous disease of unknown pathogenesis with a prevalence of 0.5–2%. This disorder shows a predilection for women in the fifth decade.¹ Esophageal involvement seems to be high: Quispel *et al.* detected esophageal lichen planus in 12 out of 24 patients diagnosed with orocutaneous lichen planus. One-third of these patients showed symptoms such as dysphagia and odynophagia.² Esophageal involvement is more frequent in patients with oral lichen planus than in anogenital or cutaneous manifestation. It is particularly noteworthy that at least 14 out of 72 patients showed an esophageal involvement solely, without any other evidence of lichen planus.¹

In the very large majority, endoscopic findings are located in the proximal esophagus (89%). These findings include lacy white papules or submucosal plaques, peeling tissue paper-like pseudomembranes, hyperemic lesions, erosive changes, and ulceration. Webs, strictures, and cases of a small-caliber esophagus are described as well. Histological features are a dense band-like lymphocytic infiltration in the lamina propria

and a degeneration of the basal layer. Single-cell degeneration of the squamous epithelium (civatte bodies) is typically present. The epithelium is often parakeratotic and may be atrophic or acanthotic.³

Owing to missing data, there are no evidence-based therapeutic recommendations. Probatory therapeutic regimes with use of acute flares of systemic corticosteroids 40–60 mg, immunosuppressants, rituximab, and topic corticosteroids have shown positive effects.^{4,5} In case of esophageal stenosis, bougienage is required.

Differential diagnosis of esophageal lichen planus should comprise dermatological diseases with esophageal involvement and esophageal disorders as well. A rare finding which can have a quite similar appearance to esophageal lichen planus is esophagitis dissecans, which is characterized by sloughing of large fragments of esophageal mucosal lining. Endoscopic features range from mild to severe forms including local erythema, red erythematous longitudinal lines, blisters, erosions, and ulcers. The esophageal mucosa is fragile and shows a positive Nikolsky's sign: stripping of the apparently normal mucosa on withdrawal of the biopsy forceps. The etiology is not clear, but there is a strong relationship to bullous dermatosis.⁶

In the absence of any dermatological diseases, gastroesophageal reflux disease, eosinophilic esophagitis, and viral and fungal infections should be considered. In addition, pill-induced esophagitis leads as well to erosive changes, ulcerations, and/or mucosal inflammation. To be differentiated from esophageal lichen planus, changes in pill-induced esophagitis are usually circumscribed. Antibiotic pills, cardiac pills, and nonsteroidal anti-inflammatory drugs and alendronate are the most common culprits.

Malignant transformation has been reported in oral lichen planus, and recently in four cases in esophageal lichen planus. Therefore, upper gastrointestinal endoscopy should be carried out on every patient with mucocutaneous lichen planus reporting very mild esophageal symptoms.

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Key Learning Points/Tips and Tricks

- A look at the skin, in case of esophagitis of unknown etiology, should be taken, especially in middle-aged women.
- Pathologist should be asked for the diagnosis of lichen planus in case of esophagitis of unknown etiology, even if any evidence of mucocutaneous lichen planus beside the esophagus is found.
- The malignant transformation potential of esophageal lichen planus should be kept in mind and upper gastrointestinal endoscopy should be carried out on every patient reporting mild esophageal symptoms.

Complications and Risk Factors

- Lugol's dye can cause from retrosternal pains, up to hypersensitivity to iodine, chemical esophagitis, laryngitis, and bronchopneumonia.

Scripted Voiceover

Time (01:20)	Voiceover text
00:00–00:10	This 58-year-old Caucasian woman has suffered for many months from odynophagia.
00:10–00:20	As you can see huge peeling tissue paper-like pseudomembranes are found directly under the upper esophageal sphincter and extend to the middle esophagus.
00:20–00:30	Pay attention to the edges of the pseudomembranes and the esophageal mucosa: There are no reactive mucosal changes close to the pseudomembranes.
00:30–00:40	In addition the non-involved areas do not show any noticeable inflammation, or ulceration etc.
00:40–00:50	Here Lugol's solution is sprayed onto the esophageal mucosa, which results in brown discoloration of the normal mucosa.

00:50–01:00	Lugol staining remains the gold standard for detecting squamous cell neoplastic lesions showing a lack of absorption of the iodine stain.
01:00–1:10	This patient does not suffer from esophageal carcinoma although you can see these large areas without any staining.
01:10–01:20	This can be explained by the pseudomembranes, which are not able to absorb the solution. Histological examination of the biopsies led to the diagnosis of esophageal lichen planus.
01:20–01:33	Keep in mind the differential diagnoses of inflammatory esophageal disorders: For example eosinophilic esophagitis as you can see here with the typical longitudinal furrows
01:33–01:40	...enhanced by indigokarmin.
01:40–01:54	Or erosive lesions in the distal esophagus caused by reflux disease.
01:54–01:57	And finally candidiasis.

References

1. Fox, L. P.; Lightdale, C. J.; Grossman, M. E. Lichen Planus of the Esophagus: What Dermatologists Need to Know. *J. Am. Acad. Dermatol.* **2011**, *65*, 175–183.
2. Quispel, R.; van Boxel, O. S.; Schipper, M. E.; *et al.* High Prevalence of Esophageal Involvement in Lichen Planus: A Study Using Magnification Chromoendoscopy. *Endoscopy* **2009**, *41*, 187–193.
3. van der Meij, E. H.; Schepman, K. P.; Plonait, D. R.; Axéll, T.; van der Waal, I. Interobserver and Intraobserver Variability in the Clinical Assessment of Oral Lichen Planus. *J. Oral Pathol. Med.* **2002**, *31*, 95–98.
4. Ukleja, A.; DeVault, K. R.; Stark, M. E.; Achem, S. R. Lichen Planus Involving the Esophagus. *Dig. Dis. Sci.* **2001**, *46*, 2292–2297.
5. Parmentier, L.; Bron, B. A.; Prins, C.; *et al.* Mucocutaneous Lichen Planus with Esophageal Involvement: Successful Treatment with an Anti-CD20 Monoclonal Antibody. *Arch. Dermatol.* **2008**, *144*, 1427–1430.
6. Hokama, A.; Yamamoto, Y.; Taira, K.; *et al.* Esophagitis Dissecans Superficialis and Autoimmune Bullous Dermatoses: A Review. *World J. Gastrointest. Endosc.* **2010**, *2*, 252–256.

Further Reading

- Minor, M. A.; Hahn, H.; Poneros, J. M. Clinical Challenges and Images in GI. Image 1: Esophageal Lichen Planus. *Gastroenterology* **2008**, *135*, 1463–1806.