



## Erb:Yag Laser Treatment in Lichen Sclerosis: A Case Report

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### Abstract

Lichen Sclerosus (LS) is a benign, chronic progressive disease which affects skin. It is characterized by inflammation, epithelial thinning, and some dermal changes. The main symptoms are pain and pruritus. Basic treatment consists of patient education and topical corticosteroids. Most patients respond well to corticosteroids. When this treatment is ineffective, other treatment options can be applied and recently, Erb:YAG laser is seen as a treatment method for vulvar LS.

**Keywords:** Erb:YAG laser, LS; VAS

### Abbreviations

Erb:YAG laser: Erbium-Doped Yttrium Aluminium Garnet Laser; LS: Lichen Sclerosis; VAS: Visual Analog Scale; FSFI: Female Sexual Function Index

### Introduction

Lichen Sclerosus (LS) is a benign, chronic progressive disease which affects skin. It is characterized by inflammation, epithelial thinning, and some dermal changes. The main symptoms are pain and pruritus [1]. Although lichen sclerosis is most commonly seen in the anogenital region, it may also occur on any skin surface [2,3]. The vulva usually is seen white, thin and wrinkled. Vulvar LS is optimally diagnosed with the presence of characteristic clinical manifestations and histologic confirmation [4]. Biopsy is required to exclude the diagnosis of vulvar cancer. Basic treatment consists of patient education and topical corticosteroids. Most patients respond well to corticosteroids. When this treatment is ineffective, other treatment options can be applied and recently, Erb:YAG laser is seen as a treatment method for vulvar LS.

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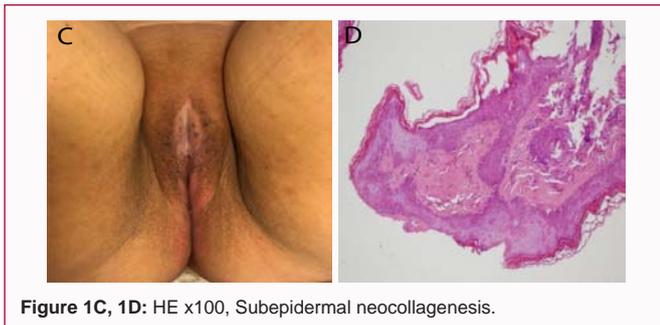
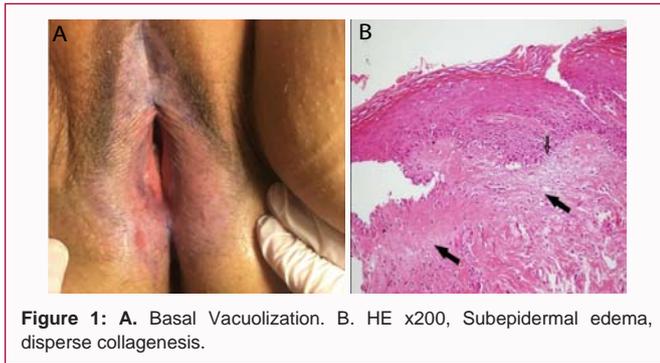
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### Case Presentation

A 50-year-old woman applied to clinic because of vulvar itching for 1 year. The patient's sexual life was about to disappear and her quality of life decreased. In her examination, some abnormalities were detected on the vulva. Vulvar skin was seen pale, thin and shiny. Labial atrophy and shrinkage were noted. Vulvar excoriation was seen because of itching. Introitus was stenotic (Figure 1A). The Visual Analog Scale (VAS) for pain was 8 out of 10 and total score of the Female Sexual Function Index (FSFI) test was 0. In order to eradicate the diagnosis of vulvar cancer, vulvar biopsy was performed and lichen sclerosis was diagnosed (Figure 1B).

For a year, she had been treated with steroid creams, anti-fungal creams and anti-allergic drugs but there was no improvement in her complaints. We decided to treat her with Erb:YAG laser. She was treated by fractional Erb:YAG laser (XS Dynamis, Fotona, Slovenia) for one session. During the session, the procedure did not cause any pain. Thirty minutes before the procedure, 5% lidocaine was applied. The fractional Fotona SMOOTH mode Erb:YAG Laser beam was directed to the area which was pale, thin, shiny and itching. A PS03 handpiece was used with a fluence of 6 J/cm<sup>2</sup>, 2 Hz, 7 mm with 4 shots in each area. 2 passes were performed. Then The fractional Fotona TURBO mode Erb:YAG Laser beam was directed to area. A PS03 handpiece was used with a fluence of 2, 4 J/cm<sup>2</sup>, 1 Hz, 7 mm with 4 shots in each area. Two passes were performed. Totally, 5006 shots were performed. After one month, she was cured and her complaints disappeared. Significant changes were observed on the vulva of the patient. Pale and shrinkage skin disappeared and the vulva was seen normal (Figure 1C). Changes were also shown histologically by biopsy (Figure 1D).



## Discussion

Recently, Erb:YAG laser is one of the accepted treatment options for vulvar atrophy and lichen sclerosis. Its use is increasing in the presence of these diseases. When classical treatments are ineffective,

Erb:YAG laser can be considered and applied as a treatment option for LS. Although its mechanism is not known, it may be effective in relieving these symptoms as it increases neo-collagenesis and neo-angiogenesis [5].

## Contribution to Authorship

Erel T and Oner Y researched the case and wrote the manuscript; T Erel performed laser therapy; Calay Z studied and reported pathology specimens. All authors have seen and agree with this case report.

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