

# Treatment for Angiokeratoma of Scrotum with the Nd:YAG Laser: Scientific Letter

## Skrotal Anjiokeratomun Nd:YAG Lazer ile Tedavisi

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**ABSTRACT** Angiokeratomas are typically benign and asymptomatic vascular lesions. Usually it doesn't require treatment. However, scrotal angiokeratomas may bleed due to friction during sexual intercourse. If lesions become symptomatic or cause cosmetic problems, the need for treatment may arise. For scrotal angiokeratomas local destructive methods like surgery, cryotherapy, electro-surgery, and laser have been used until today. A 55-year-old male patient attended our outpatient clinic because of scrotal angiokeratomas with a tendency to bleed during sexual intercourse. Four sessions of 1064 nm wave-length Nd:YAG laser was performed. Lesions regressed nearly completely without any complications after the treatment. Nd:YAG laser is found to be quite effective for the treatment of scrotal angiokeratomas.

**Key Words:** Angiokeratoma; laser therapy; scrotum

**ÖZET** Anjiokeratomalar tipik olarak benign, asemptomatik vasküler lezyonlardır. Lezyonlar için genellikle tedavi gerekli değildir. Ancak bazen skrotal yerleşimli anjiokeratomalarda cinsel ilişki sırasında sürtünme ile kanama oluşabilir. Lezyonlar bu şekilde semptomatik hale geldiğinde ve kozmetik problemlere neden olduğunda tedavi ihtiyacı olabilir. Skrotal anjiokeratomalarda şu ana kadar cerrahi ve kriyoterapi, elektrocerrahi, lazer gibi lokal destrüktif yöntemler tedavide kullanılmıştır. 55 yaşında erkek hasta polikliniğimize cinsel ilişki sırasında kanamalı hale gelen skrotal anjiokeratoma nedeniyle başvurdu. Hastaya 1064 nm dalga boylu Nd:YAG lazer ile 4 seans tedavi uygulandı. Tedavi sonrası lezyonlar tama yakın herhangi bir komplikasyon oluşmadan geriledi. Skrotal anjiokeratomalarda Nd:YAG lazerin oldukça etkili bir tedavi yöntemi olduğu görülmektedir.

**Anahtar Kelimeler:** Anjiokeratom; lazer tedavisi; skrotum

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Localized angiokeratoma on scrotum has been first described in a 60-year-old male patient by Fordyce in 1896.<sup>1</sup> While Fordyce angiokeratoma is known to be asymptomatic, it might bleed due to scratching or friction during sexual intercourse. This situation leads to social and emotional problems in patients. Surgery or local destructive treatment methods may be used (e.g. cryotherapy, electrocautery, laser etc.) for treatment. Here, we present a case of scrotal angiokeratoma successfully treated with 1064 nm Nd:YAG laser.

A 55-year-old patient applied to our department with multiple reddish purple black-colored, asymptomatic, papules 1-4 mm in diameter which were increasing in number for the last 5 years on the scrotum. He com-

plained of bleeding after sexual intercourse recently (Figure 1a). The patient's history and family history were unremarkable. Systemic physical examination was normal. Laboratory tests were within normal limits. Based on clinical and dermoscopic findings, he was diagnosed as Fordyce angiokeratoma.

The patient had not used any treatment for these lesions before. Nd:YAG laser treatment of 1064 nm wavelength was used to treat the lesions. Topical anesthesia was applied to the scrotum before treatment. 4 mm spot diameter and 20 ms pulse width was used. (Treatment was started with 90 J/cm<sup>2</sup> and increased by 10 J/cm<sup>2</sup> until optimal response was received and then the process continued with 130 J/cm<sup>2</sup> fixed energy). Treatment took a total of four sessions, each with two month intervals, until acceptable results were achieved (Figure 1b). Vesiculation and mild swelling was observed with some lesions at the beginning, however no permanent side effect was observed. No recurrence occurred on follow up.

Treatment was planned for our case, due to bleeding of the scrotal angiokeratomas. After 4 sessions of treatment with 1064 nm Nd: YAG laser almost full recovery was observed with no side effects. While there are only a very limited data in the literature related to treatment of Fordyce angiokeratoma using 1064 nm Nd: YAG laser, other laser systems have been reported.

Argon laser,<sup>2</sup> carbon-dioxide laser,<sup>3</sup> Cooper vapor laser,<sup>4</sup> KTP laser,<sup>5</sup> pulsed dye laser<sup>6</sup> have been reported to be used in treatment of angiokeratoma successfully. In treatment of Angiokeratoma, Nd:YAG laser was first used by Sommer et al.<sup>7</sup> to treat acral variant of angiokeratoma of Mibelli and received a considerably good response to the repeated sessions of treatment. No side effect was reported excluding some scarring and hyperpigmentation. In their case series study consisting of two women and eight men Özdemir et al.<sup>8</sup> have used 1064 nm Nd:YAG laser (92 J/cm<sup>2</sup> energy, 14 ms pulse width) treatment. No side effect has been



**FIGURE 1a:** Pretreatment appearance of lesions.  
(See for colored form <http://uroloji.turkiyeklinikleri.com/>)



**FIGURE 1b:** Appearance of lesions after treatment.  
(See for colored form <http://uroloji.turkiyeklinikleri.com/>)

reported except for atrophic scarring observed in one patient and healing has been observed in the patients at various rates ranging from 70-100%. Civaş et al.<sup>9</sup> have used 1064 nm Nd:YAG laser (120-160 J/cm<sup>2</sup> energy, 20-30 ms pulse width) in two cases with Fordyce angiokeratoma and have obtained full response and reported no permanent side effect.

As can be observed from data obtained both in the presented case and from literature, applying Nd:YAG laser in scrotal angiokeratomas appears to be a considerably effective treatment method.

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