

CO₂ laser for vaginal atrophy: Efficacy and side effects

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Objective and background

The objective was to assess the efficiency and safety of fractional carbon dioxide (CO₂) laser in Danish postmenopausal women with symptomatic vulvovaginal atrophy (VVA).

Methods and material

We conducted an 11-month longitudinal study of postmenopausal women with symptomatic VVA. The women were treated by three series of pulsed fractional CO₂ vaginal laser 4 weeks apart (figure 1) and undesired effects in relation to treatment were recorded in questionnaires (figure 4). The effect was evaluated objectively (vaginal pH and degree of atrophy, figure 3) and by questionnaires (figure 2) with symptoms scored 0-10 on a visual analogue scale (VAS), performed at baseline prior to treatment and at all follow up visits.

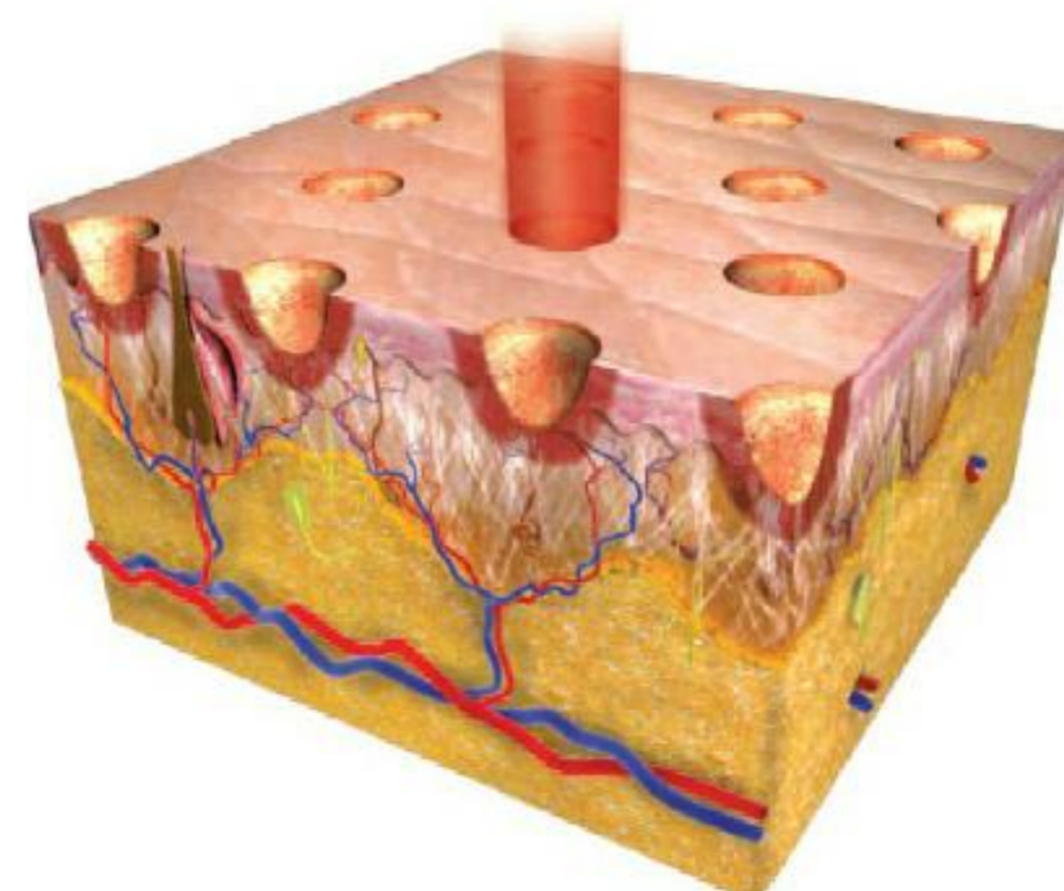
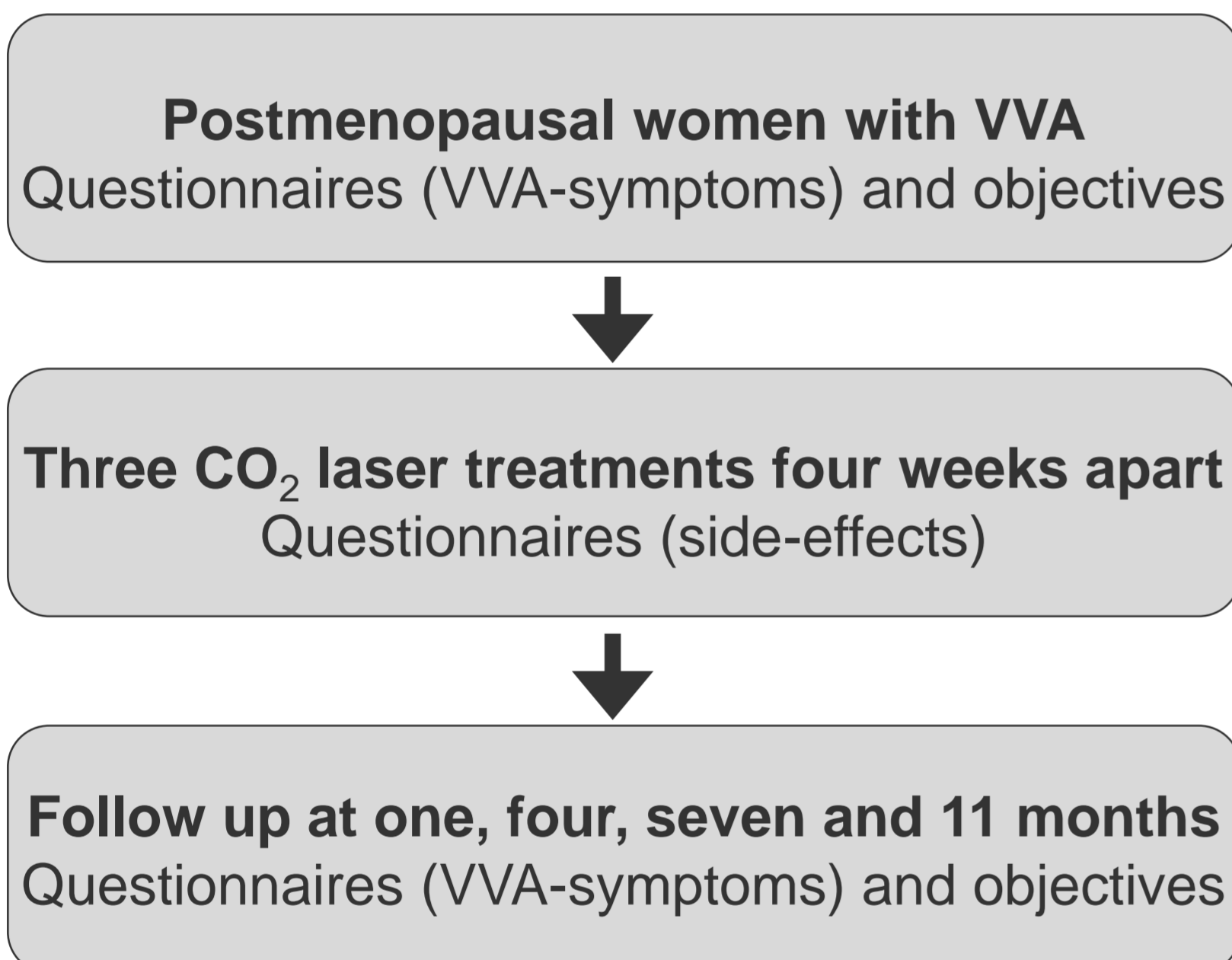


Figure 1. Illustration of trial flow to the left and of laser dots in the vaginal mucosa on the right, respectively. (VVA: vulvovaginal atrophy).

Results

16 women met the eligibility criteria (menopause ≥ 12 months, at least one VVA-symptom rated ≥ 6 (VAS), vaginal pH ≥ 5, never breast cancer). Their age ranged from 48-68 years (median 58 years) and the time from menopause ranged from 2-24 years (median 10.5 years).

Satisfaction with sex life increased and most VVA-symptoms declined after three treatments and remained reduced at the end of the study (median VAS, figure 2).

Compared to baseline, the fraction of women with normal vaginal mucosa was significantly higher at all follow up visits. The vaginal pH was decreased (from 7 to 5) one month after the last treatment and was also lowered at study end, although the change was not significant at the seven month follow up.

The median VAS-score for discomfort and pain in relation to treatment were equal to or less than 1. Vaginal spotting was reported after seven of 48 treatments and paracetamol was needed in four cases.

Conclusions

In this Danish population, fractional CO₂ laser seemed to be an effective and safe treatment for VVA, which is in line with results of international trials.

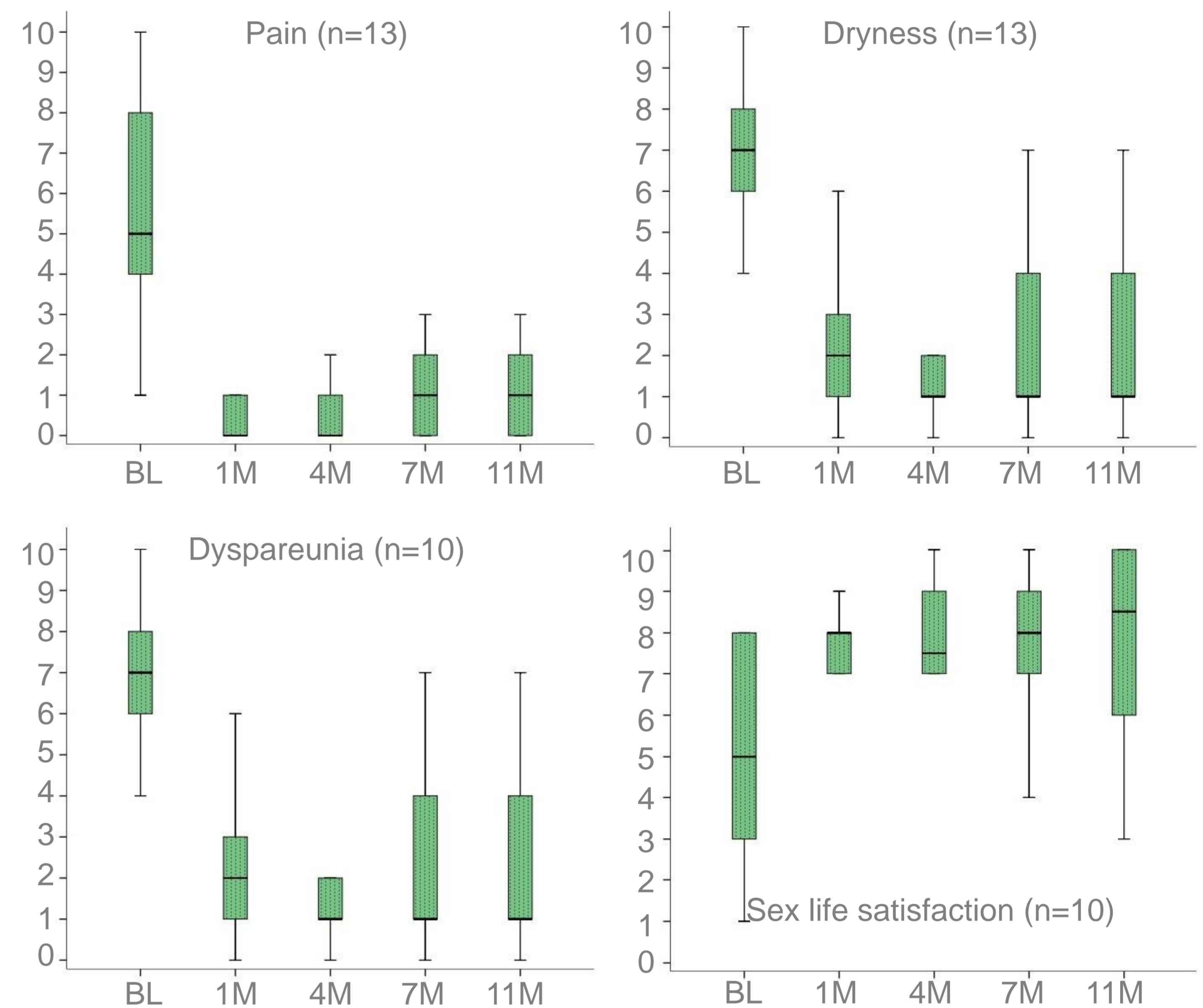


Figure 2. Illustration of subjective VAS-scores at control visits compared to baseline. 10-point VAS-score on the Y-axis and time on the X-axis. Note that for sex life satisfaction the scale is reversed, i.e. increasing scores equals improved satisfaction. (BL: baseline, M: months after last treatment).

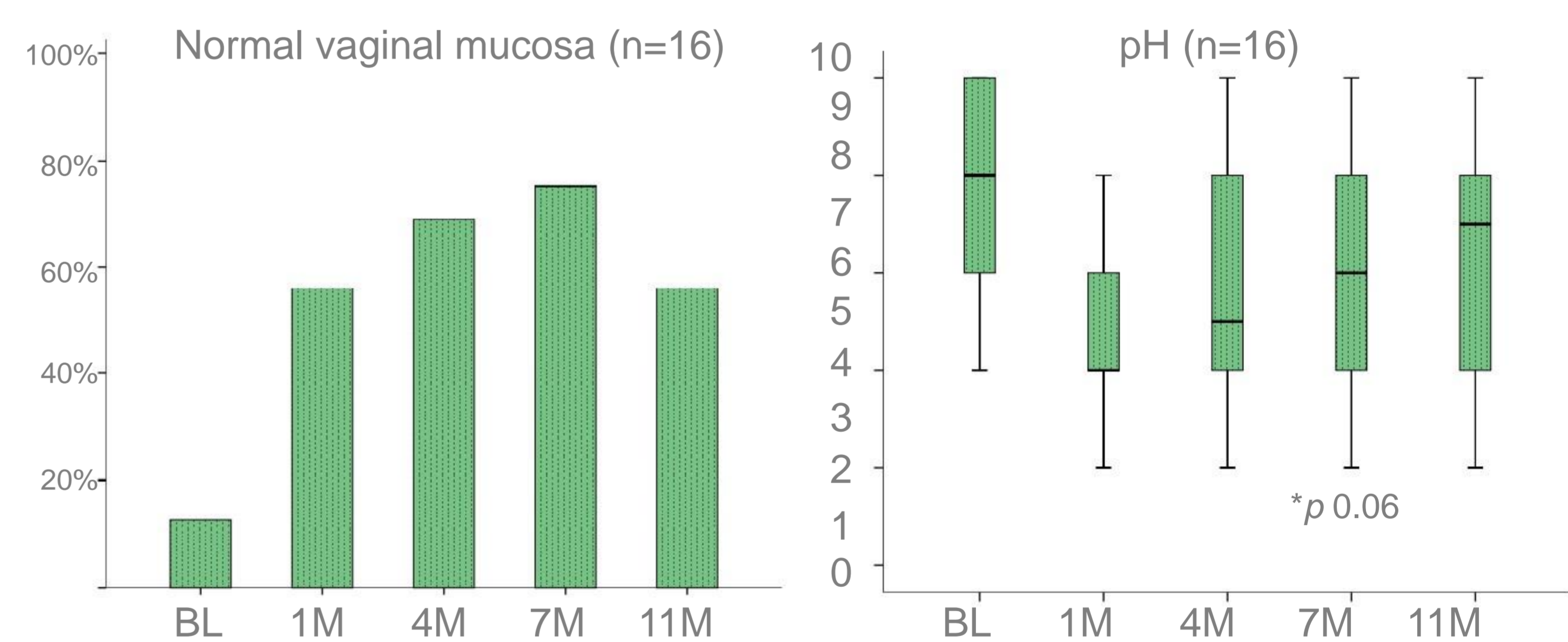


Figure 3. Objective findings at control visits compared to baseline. Time on the X-axis. (BL: baseline, M: months after last treatment).

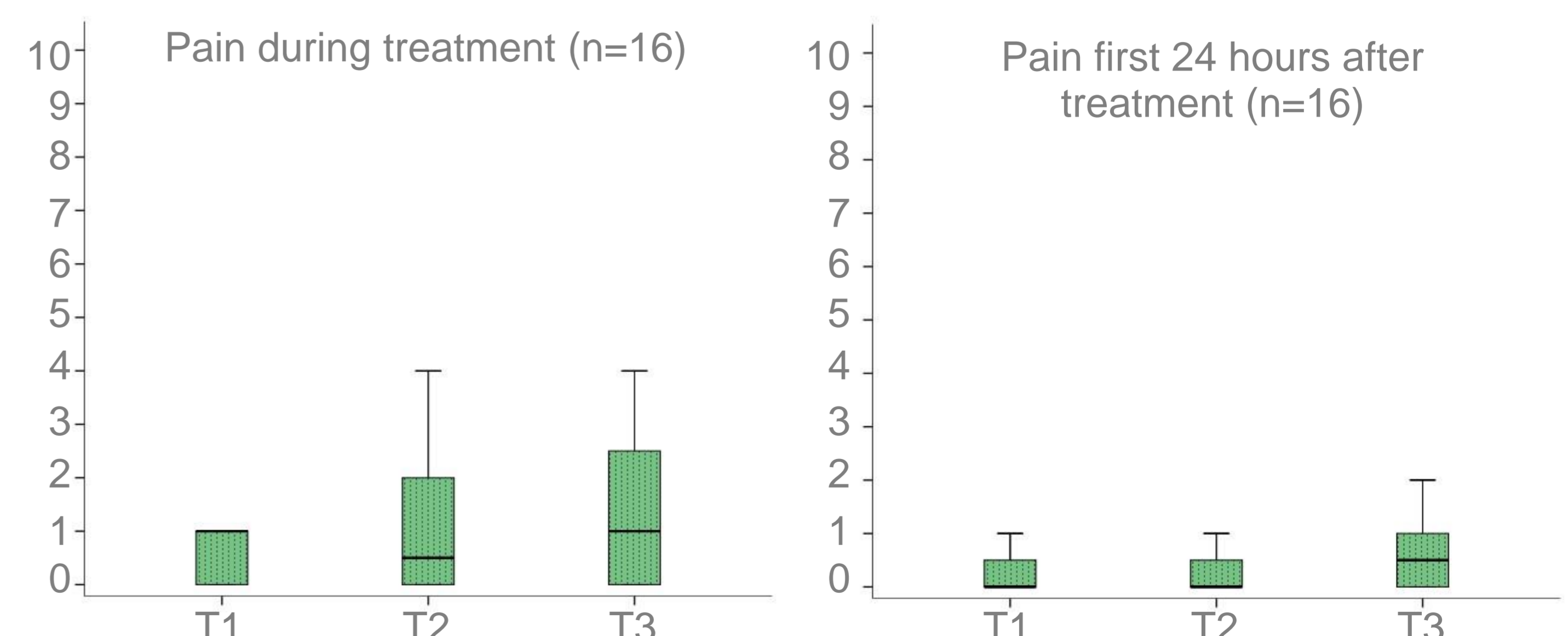


Figure 4. Illustration of subjective VAS-scores of pain related to treatments. 10-point VAS-score on the Y-axis and treatment number on the X-axis. (T: treatment).