A Hygienist’s Step-by Step Guide to Non-surgical Laser Assisted Periodontal Care

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Disclosure:

Jeanette Miranda and Mary Lynn Smith have no commercial relationships.
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Objectives:

- Identify stages of periodontal disease
- Treatment planning appropriately
- Case study
- Resolution: supportive care vs continued therapy
- Case documentation
Identify the Disease

**Gingivitis**
4mm+ pseudopockets
Bleeding, swelling, tenderness

**Periodontitis**
4mm+ pockets with boneloss
Bleeding, swelling, tenderness
Treatment Planning
## Treatment Planning

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Healthy</td>
<td>No Pockets</td>
<td>No Laser Treatment</td>
</tr>
<tr>
<td><strong>Gingivitis</strong></td>
<td><strong>Bleeding Pockets</strong></td>
<td><strong>LBR-1 appointment</strong> (Laser bacterial reduction)**</td>
</tr>
<tr>
<td>Early Perio</td>
<td>3-4 mm Pockets</td>
<td>LBR-1 appointment</td>
</tr>
<tr>
<td><strong>Moderate Perio</strong></td>
<td><strong>5-6 mm Pockets</strong></td>
<td><strong>LAPT-2/3 appointments</strong> (Laser assisted perio therapy)</td>
</tr>
<tr>
<td>Advanced Perio</td>
<td>6+ mm Pockets</td>
<td>LAPT-3+ appointments</td>
</tr>
</tbody>
</table>
Multiple vs Single Laser sessions

**Multiple Sessions**
- Chronic wounds cleared of biofilm at 7 day intervals
- Deep pockets - extends the time of optimal environment for healing
- Repeated biostimulation
- Allows continued coaching the patient in daily biofilm management

**Single Session**
- Minimal inflammation and pocketing doesn’t need repeated visits
- Convenient for scheduling

**GREATER AMOUNT OF DISEASE AND DESTRUCTION**

**HEALTHIER PATIENT BEING TREATED EARLIER**
Indications for Laser Use

• Creating a favorable environment for healing

• Enhance the body’s natural healing response by reducing the microbial and inflammatory challenges

• Deactivating bacteria in tissue wall and crevicular fluid

  RDH is working at low settings:
  
  nonsurgical 50°C vs. surgical at 100°C
Difficult Case Study
Patient Background & Hygiene Diagnosis

• Patient background:
  - 60 year old Caucasian Female
  - No dental complaints
  - History of acid reflux

• Hygiene diagnosis:
  - Severe generalized chronic periodontitis with good prognosis for #5, 9, 10, 11, 15, 19 and 26
  - Sever generalized chronic periodontitis with guarded prognosis for #3, 4, 12, 20, 27, 28, 29, 30 and 31
Periodontal Treatment Plan

- Active Phase SRP 2-2 hour appointments
- Active Phase LAPT 2-1 hour appointments, 7-10 days apart
- Evaluation in 3 months
LAPT

• Review procedures and sign consent forms
• Apply topical/local anesthetic
• Use ultrasonic scaler
• Use laser
• Decontamination
• Tissue coagulation
• Biostimulation
• Apply Vitamin E oil
• Post op instructions
Preparing Fiber

Measure and Cleave Fiber

Check Cleave

Initiate fiber
Immediate post-op

Topical anesthetic
Laser

Ultrasonic
Immediate post-op
Evaluation

✦ Supportive recare
✦ Further active treatment
✦ Referral
Evaluation Criteria

Supportive Care

♦ Improvement noted
♦ Continued inflammation present
♦ Continue biofilm management coaching
♦ Can the appointment needs be accomplished in the appointment time?

Friday, February 20, 15
Evaluation Criteria

Retreatment

✦ If pockets 5mm+ with bleeding persist
✦ More than can be addressed with 1 hr
✦ Are Laser Decontamination appts required

This may be difficult to determine and recommend
Evaluation Criteria

Referral
(Out of hygiene chair)

Approximately at 1 yr following laser therapy if a deep pocket persists with BOP

Clinician’s judgement
Periodontal Assessment: 4 Weeks
Periodontal Assessment: 3 Months
Initial Probe 5mm

Three month Post op
Probe 3mm
Photo Documentation

✦ Pre-op general*
✦ Pre-op probe
✦ Operative with laser in place
✦ Post-op immediate*

* suggested minimum photos
Photo Documentation

- Post-op 1 week
- Post-op with probe
  -12 wk appts
  -6, 9, 12 months
Written Documentation

- Signed consent form for laser treatment and photography
- Type of laser and wavelength
- Tip/Fiber size
- Continuous or pulsed emission mode
- Settings used for all steps
- Total wattage/time
- Use of ultrasonic scaler
- Use of topical or local anesthetic
- Use of Methylene Blue Dye
- Use of Vitamin E oil
- Post op instructions given

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Written Documentation

5-1-2008  Updated HH. Pt signed LAPT consent form.
LAPT provided on all 5mm pockets on teeth (#3,4,12,13,28,29,30,31)
Used 810 nm diode laser/400 micron tip/safety glasses/HVE.
Used ultrasonic scaler.
Decontamination-0.5-0.9 W CW with initiated tip, 15 to 30 seconds per site. Very slight tissue interaction.
Tissue coagulation -0.5 W CW for 10 seconds per site
Biostimulation 1.5 W PW 30/30 30 seconds per site. Vit E oil.
Gave post-op instructions. Photos taken. Total time 10 min 248 J
NV: 1 wk re-treat LAPT
2-14-2014 Periodontal Therapy UR

Pt presented...Objectives of treatment reviewed. Administered anesthetic...OHI...

Teeth # 2-8 debrided definitively with manual and ultrasonic instrumentation.

Bacterial reduction of pockets with CO2 superpulsed laser 10.6 micron wavelength at Level 5, 50 Hz, for an average power of 2.1 W, pulsed wave mode, 100 mm handpiece, perio insert with tip giving a 400 micron spot size. Energy applied for 30 sec or less within the sulcus per tooth.

Laser glasses were worn. No adverse reactions. Post Op instructions given.
...the more you LEARN, the you more you USE your laser...

and help others improve their oral health.
Reasons for Pursuing Advanced Proficiency

- **In depth learning on specific wavelength. Adds to what was already learned in general laser knowledge of the standard proficiency**
- Increased laser knowledge
- Prestige and recognition of advanced education by peers
- Better clinician using a laser
- Attended more conferences to learn more
- Advanced education--Beyond MINIMAL knowledge
- **Obligated to expand your knowledge in order to treat patients to the highest standard of care**
- Updates the laser user on the latest information for the best applications possible
- Background for teaching other laser courses, such as an introductory course. It is a prerequisite to becoming an ALD recognized course provider to offer a standard proficiency certification.
- Personal satisfaction of highest level of testing completed.
- **Legal purposes--prove your education level if needed**
- Deeper understanding of physics, fundamentals, safety, etc.
- Learning experience to compile the details of a case and defend the procedure rationale verbally as well as written.
- **Connecting with a mentor with open dialogue of learning through specific cases and laser applications**
Reasons for Pursuing Advanced Proficiency

- **Broader knowledge base of lasers**
- Safety for all
- Credentials show patients knowledge of advanced technology and treatment
- **Understand the how and the why of laser application for the specific procedures needed in the case study**
- Understanding the laser parameters and adjustments to solve issues for the patient
- Preparing clinical cases requires detail but also promotes objectivity.
- **Continued learning and progressing in one’s career, energizing rather than draining**
- Self esteem and confidence builder
- Shows advancement in one’s clinical expertise
- **Connecting with an elite and excellent international organization and experiencing a reciprocal commitment.**
- Prerequisite to ALD Mastership honor
- A mean’s of sharing ones clinical cases
- **To improve communications with patients and educate them on advantages of laser-assisted procedure. “An educated patient is a more compliant patient”**
ALD Hygienists are all about Lending a Helping Hand.
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