

## Clinical Studies for the only FDA-approved needle-free anesthetic

### Clinical studies of Oraqix have shown it to typically provide an effective pain relief for SRP procedures.

The studies included three randomized, double-blind, placebo-controlled trials designed to investigate the:

- Anesthetic effect of Oraqix, in conjunction with scaling and/or root planing (SRP)
- Individual patient estimates of pain on a 0-100mm Visual Analogue Scale (VAS)
- Safety profile of Oraqix.

### Experimental Design

- Three randomized, placebo-controlled, multi-center studies
- A total of 337 patients were studied (146 males and 191 females; 169 received Oraqix and 168 received placebo).
- Subjects received a median dose approximately 1 cartridge (1.7 g gel), ranging from 1/4- 2-1/2 cartridges, per quadrant treated.
- The primary objective of the studies was to estimate the analgesic effect of Oraqix with respect to a 100 mm visual analog scale (VAS\*).
- Secondary objective was to compare individual patient estimates on a 5-step categorical rating scale (VRS\*) and the number of patients requiring rescue anesthetics.

### Results

Highlights of studies results:

- Oraqix was statistically better than placebo in reducing pain scores (VAS)
- 50% reduction in pain scores

The results of the primary objective are shown in the tables below. Because of the low placebo scores in unselected patients in Studies B1 and B2, Study B3 selected patients with a known sensitivity to mechanical probing of dental pockets.

### Visual Analog Pain Scale

Study (number of patients)	Oraqix Median VAS	Placebo Median VAS
B1 (n=122)*	7	17
B2 (n=130)*	5	13
B3 (n=85)*	11	27

\*p<0.05

The results of the secondary objective are shown in the next table.

### Verbal Rating Scale

Number of Patients Reporting “no pain” or “mild pain” during SRP

Study (No. of patients)	Oraqix <sup>1</sup>	Placebo
B1 (n=122)*	57 (90%)	38 (64%)
B2 (n=130)*	49 (78%)	51 (76%)
B3 (n=85)*	30 (70%)	20 (48%)

\* p<0.05 in the statistical test of the five categorical scale

## Adverse Reactions

Following SRP treatment 391 patients receiving Oraqix, the most frequent adverse events were local reactions in the oral cavity (see following table). These events, which occurred in approximately 15% of patients, included pain, soreness, irritation, numbness, vesicles, ulcerations, edema and/or redness in the treated area. Of the 391 patients treated with Oraqix, five developed ulcerative lesions and two developed vesicles of mild to moderate severity near the site of SRP. In addition, ulcerative lesions in or near the treated area were also reported for three out of 168 patients who received placebo. Other symptoms reported in more than one patient were headache, taste perversion, nausea, fatigue, flu, respiratory infection, musculoskeletal pain and accident/injury.

System Organ Class Preferred Term	Oraqix gel* (N=391) n (%)	Placebo Gel (N=391) n (%)	Lidocaine injection (N=391) n (%)
<b>Muscular-Skeletal System Disorders</b>			
Myalgia	1(0)	2(1)	
Arthralgia and/or Arthropathy	1(0)	1(1)	
<b>Central &amp; Peripheral Nervous System Disorders</b>			
Headache	8(2)	3(2)	5(3)
Dizziness	1(0)	1(1)	1(1)
<b>Special Senses Other Disorders</b>			
Taste Perversion <sup>1</sup>	8(2)	1(1)	
<b>Gastro-Intestinal System Disorders</b>			
Nausea	3(1)		1(1)
<b>Respiratory System Disorders</b>			
Respiratory Infection	2(1)		1(1)
Rhinitis		2(1)	
<b>Body as a Whole-General Disorders</b>			
Accident and/or Injury	2(1)	2(1)	
Fatigue	3(1)		2(1)
Flu-like Disorder	2(1)		
Pain (remote from application site)	1(0)	2(1)	1(1)
<b>Application Site Disorders**</b>			
Anesthesia Local	2(1)		
Application Site Reaction***	52(13)	20(12)	

<sup>1</sup> includes complaints of bad or bitter taste lasting for up to 4 hours after administration of Oraqix

\* in a cross-over study, 170 subjects received either Oraqix or lidocaine injection 2% in each test period

\*\* i.e., symptoms in the oral cavity

\*\*\* includes pain, soreness, irritation, ulcerations, vesicles, edema, abscess or redness in the treated area

## References

1. Jeffcoat MK, Geurs NC, Magnusson I, MacNeil S, Mickels N, Roberts F, Robinson P, Salamati A, Yukna R. "Intrapocket Anesthesia for Scaling and Root Planing: Result of a Double- Blind Multicenter Trial Using Lidocaine Prilocaine Dental Gel." *J Periodontal* July 2001; 72: 895-900
2. Donaldson D, Gelsky SC, Landry RG, Matthews DC, Sandhu HS. "A Placebo-Controlled Multicentered Evaluation of an Anesthetic Gel (Oraqix®) for Periodontal Therapy." *J Clin Periodontal* 2003; 30: 171-175
3. Magnusson I, Geurs N, Harris P, Hefto A, Mariotti A, Mauriello S, Soler L, Offenbacher S. "Intrapocket Anesthesia for Scaling and Root Planing in Pain-Sensitive Patients." *J Periodontal* May 2003; 74: 597-602
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