

The Waterpik® Water Flosser: Significantly More Effective than the Sonicare® Air Floss Pro for Improving Oral Health

Effectiveness of two Interdental Cleaning Devices on Clinical Signs of Inflammation: A Randomized Clinical Trial

Goyal CR, Lyle DM, Qaqish JG, Schuller R. Poster presentation at IADR, San Francisco, CA March 23, 2017. Abstract # 0885. Study conducted at All Sun Research Center LTD, Mississauga, Ontario, Canada.

Objective

To determine the effectiveness of a water flosser in reducing clinical signs of inflammation as compared to an air floss.

Methodology

Seventy subjects were randomized equally into two groups in this 4-week, parallel clinical trial: manual tooth brushing and water flosser (WF, model WP-120, two prong plug) or manual tooth brushing and air floss (AF, Model HX8340, two prong plug). Inflammation was measured using bleeding on probing (BOP) and the Modified Gingival Index (MGI) at baseline, 2-weeks and 4-weeks. The Rustogi Modified Navy Plaque Index (RMNPI) scores were measured at baseline, 2-weeks and 4-weeks. Both groups followed manufacturer instructions for use of interdental devices for one minute. The WF group used power setting 8 and the AF group used the 3 burst setting.

Results

Both groups showed a significant reduction in BOP, MGI and RMNPI at 2- and 4-weeks ($p < 0.001$). The WF was at least 50% more effective than the AF at reducing BOP for all areas measured at 4-weeks ($p < 0.001$). The WF was also more effective than the AF for reducing MGI: 60% for whole mouth, 68% for proximal area, 86 for facial proximal area, 54% for lingual proximal area, 48% for marginal area, 62% for facial marginal and 36% for lingual marginal area ($p < 0.001$). The WF was more effective for reducing plaque compared to the AF for whole mouth (31%, $P = 0.008$), proximal area (51%, $p = 0.017$) and lingual surface (46%, $p = 0.004$).

Conclusion

This study demonstrates that a water flosser and manual toothbrush are superior to the air floss and manual toothbrush in the reduction of inflammation and dental plaque.

