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## مقارنة ما بين فعالية تنظيف السواك وفرشاة الأسنان

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### الملخص

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Turesky

Not significant

.(P< 0,01)

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(% ≤ HYG)

.(P< 0.05)

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# Miswak versus Toothbrush: A Comparison of Cleaning Efficiency

Hamed Ahmad\*

Ousama Ibrahim\*

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## Abstract

The aim of this clinical study is to determine the efficiency of miswak (cleaning sticks – chewing sticks) in comparison with toothbrush in removing dental plaque from facial, lingual and interproximal surfaces and reducing Gingivitis.

A total of 56 dental students who were divided into two groups were included in the study. This study was divided into two stages.

The first stage, and after the experimental plaque accumulation, the volunteers cleaned their teeth (toothbrush or miswak) for five minutes. Then the clinical measurements were recorded.

The second stage, the volunteers used according to their group either toothbrush and dentifrice or miswak twice a day for five minutes for three weeks.

In the first stage, there was no difference between the two groups in gingivitis. The values of Turesky's index to assess the plaque on facial and lingual surfaces were a little higher for miswak users, but the difference was statistically insignificant. While the cleaning of interproximal spaces was more evident in toothbrush users, either facial or lingual, and the difference was significant ( $P < 0.01$ ).

Generally, neither miswak nor toothbrush were able to produce completely interproximal dental health. So, the cleaning of facial surfaces by using toothbrush or miswak was better than lingual surfaces ( $P < 0.05$ ).

In the second stage, the plaque and gingival values were higher in miswak users, but the difference was not significant.

The result: miswak cannot remove dental plaque completely, but the site of plaque on the facial and lingual surfaces were almost similar to those among toothbrush users.

Finally, a toothbrush possessed a clear superiority in cleaning interproximal spaces, thus making it the oral Hygiene aid of choice.

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نتائج الفحص الأول (المرحلة التجريبية):

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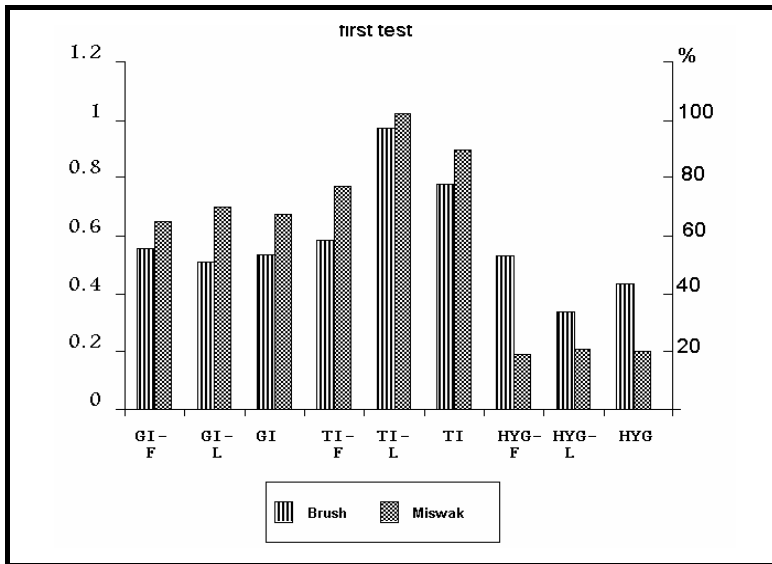
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| index        | tooth brush<br>n1 = 28 |         | miswak<br>n2=28 |         | p_value |
|--------------|------------------------|---------|-----------------|---------|---------|
|              | mean                   | (SD)    | mean            | (SD)    |         |
| GI-facial    | 0.555                  | (0,364) | 0.648           | (0,381) | NS      |
| GI-ligual    | 0.51                   | (0,324) | 0.703           | (0,391) | NS      |
| GI           | 0.533                  | (0,301) | 0.676           | (0,340) | NS      |
| TI-facial    | 0.585                  | (0,708) | 0.773           | (0,449) | NS      |
| TI-ligual    | 0.973                  | (0,495) | 1.025           | (0,512) | NS      |
| TI           | 0.778                  | (0,495) | 0.899           | (0,431) | NS      |
| HYG-Facial % | 52.9                   | (34,5)  | 19.4            | (17,5)  | < 0.01  |
| HYG-ligual % | 33.7                   | (28,3)  | 20.6            | (17,9)  | < 0.05  |
| HYG %        | 43.3                   | (26,7)  | 20              | -14     | < 0.01  |

SD = Standard Deviation  
 NS = Not significant



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نتائج الفحص الثاني (المرحلة الاعتيادية)

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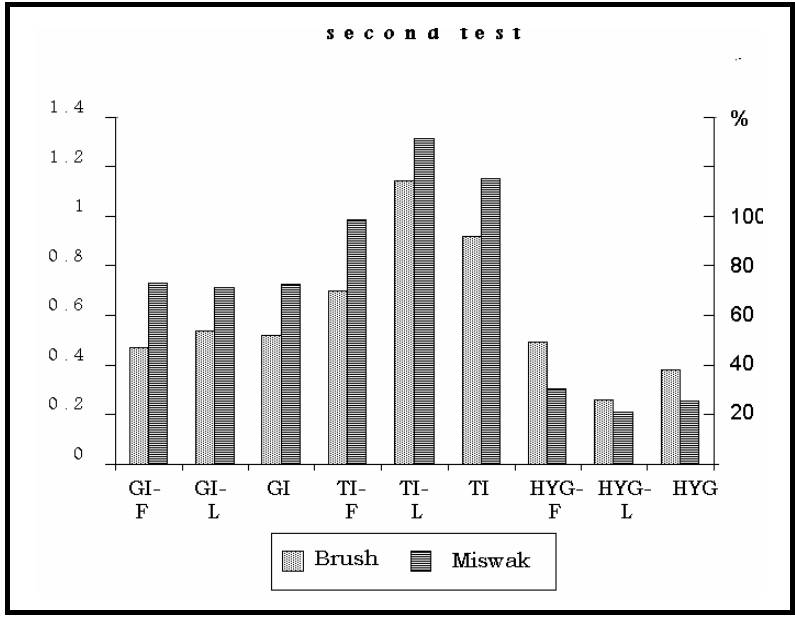
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| Index         | tooth brush<br>n1 = 17 |         | miswak<br>n2=20 |         | P_value |
|---------------|------------------------|---------|-----------------|---------|---------|
|               | Mean                   | (SD)    | Mean            | (SD)    |         |
| GI-Facial     | 0.468                  | (0,355) | 0.73            | (0,344) | NS      |
| GI-Lligual    | 0.537                  | (0,385) | 0.716           | (0,357) | NS      |
| GI            | 0.521                  | (0,346) | 0.723           | (0,345) | NS      |
| TI-Facial     | 0.695                  | (0,766) | 0.984           | (0,617) | NS      |
| TI-Lligual    | 1.141                  | (0,515) | 1.316           | (0,662) | NS      |
| TI            | 0.918                  | (0,487) | 1.15            | (0,55)  | NS      |
| HYG-Facial %  | 49.4                   | (37,6)  | 30.1            | (20,7)  | NS      |
| HYG-Lligual % | 26.2                   | (24,1)  | 21              | (19,9)  | NS      |
| HYG %         | 37.7                   | (27,7)  | 25.5            | (18,6)  | NS      |

SD = Standard Deviation

NS = Not significant



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(P < 0.05)

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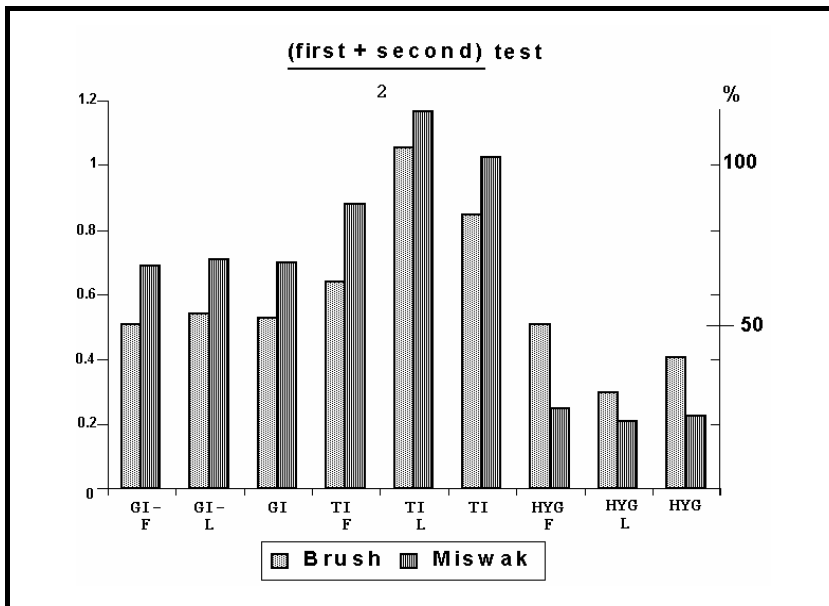
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| Index         | tooth brush |         | miswak |         | P_value |
|---------------|-------------|---------|--------|---------|---------|
|               | Mean        | (SD)    | Mean   | (SD)    |         |
| GI-Facial     | 0.512       | (0,321) | 0.69   | (0,296) |         |
| GI-Lligual    | 0.541       | (0,298) | 0.709  | (0,274) | NS      |
| GI            | 0.526       | (0,293) | 0.699  | (0,249) | NS      |
| TI-Facial     | 0.64        | (0,445) | 0.879  | (0,396) | NS      |
| TI-Lligual    | 1.057       | (0,381) | 1.17   | (0,507) | NS      |
| TI            | 0.848       | (0,35)  | 1.024  | (0,377) | NS      |
| HYG-Facial %  | 51.1        | (30,9)  | 24.8   | (12,6)  | <0.05   |
| HYG-Lligual % | 30          | (22,3)  | 20.8   | (15)    | NS      |
| HYG %         | 40.5        | (23,0)  | 22.7   | (12)    | <0.05   |

SD = Standard Deviation  
NS = Not significant



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