3. SUBJECTS AND METHODS

GENERAL DESCRIPTION OF THE STUDY

The present study is a cross-sectional study (which includes) including a questionnaire on personal data, oral self-care practices, systemic disease status in relation to diabetes and hypertension status, use of tobacco and periodontal clinical examination. The study was approved by the ethical board, Faculty of dentistry, Sebha University.

The data collection took place between July 2009 to July 2010 in Sebha a Saharan city with a population of around 1,000,000 inhabitants in the city and the countryside in near vicinity. It is a southern city in Libya a sparsely populated North African country with a population of 5.3 million.

3.1 STUDY POPULATION, SAMPLING AND DATA COLLECTION

The target population was general population of Sebha, Libya. Participants gave verbal consent to participate in the study, being assured that they will remain anonymous in regard to their personal data. Collection of data took place from various public places such as schools, households, hospitals, hostels, colleges and various other places of work. Out of 2009 respondents 3 refused to participate excusing themselves as being tired, too old, unwilling, not interested or too busy. 2006 subjects filled the questionnaire and underwent a dental clinical examination. All age groups were included in the study so that the results represent the status of the whole sample rather than particular age groups. The sample was collected randomly.

3.2 QUESTIONNAIRE

A single page questionnaire was used to assess the oral hygiene practices habits and systemic diseases. The questionnaire was prepared in English, was translated into
vernacular language and retranslated into English to evade language errors. The questionnaire enquired about the oral hygiene practices, systemic health status especially about systemic diseases such as diabetes, hypertension and smoking habits.

Questions regarding their oral hygiene practices covered tooth brushing, frequency, traditional methods, and other cleaning aids. The question: How often do you brush your teeth offered four answer alternatives. The alternative answers were once daily, twice daily, more than twice and never. Use of traditional oral self care practices such as siwak was questioned.

Use of fluoridated tooth paste which is the only type prevailing in the Libyan market was enquired. Recommended oral self care consisted of use of fluoridated tooth paste with twice tooth brushing.

Smoking habits were recorded with questions only in relation to current smoking on the type of smoking such as cigarette smoking, pipe smoking, frequency of smoking (cigarette/pipe smoking), duration of smoking which was further categorized as 10, 10-30, 30-60 and more than 60 minutes.

3.3 EXAMINER AND EXAMINATION

The sample was examined by a single calibrated examiner with the help of an assistant. During calibration 10% of the subjects were reexamined to rule out intra examiner errors. The examination procedure was W.H.O Type 3 examination.

Examinations were carried out in the nearest public dental centre with natural light to reduce diagnostic bias. After examining the probes were washed and stored in Cidex solution and were reused again after autoclaving. Community periodontal index (CPI) was used to assess the periodontal status. The index is simple, rapid, inexpensive, easily applied and requires minimum of equipment. Three indicators of
periodontal status served for the assessment: 1) presence or absence of gingival bleeding, 2) supra- and subgingival calculus, 3) periodontal pocket, subdivided into 4-5mm and ≥6mm (Ainamo et al., 1987; WHO, 1997).

A flat mouth mirror and CPI probe by DENTSPLY™ were used to examine the subjects. The CPI colour coded probe helps in assessing the periodontal pocket depths around the teeth. The colour band extends from the 3.5mm line to the 5.5mm line. At the tip of the probe there is a 0.5mm diameter ball that assists in feeling the sub gingival calculus and also prevents the probe from being pushed through the inflammatory tissue at the base of a pocket and in turn prevents injury to gums.

### 3.4 COMPUTER PERIODONTAL INDEX CODES AND CRITERIA

<table>
<thead>
<tr>
<th>CPI SCORE</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 0</td>
<td>Healthy</td>
</tr>
<tr>
<td>Code 1</td>
<td>One or more sextants with bleeding on probing</td>
</tr>
<tr>
<td>Code 2</td>
<td>Calculus.</td>
</tr>
<tr>
<td>Code 3</td>
<td>Pocket 4-5mm(black band on probe partially visible)</td>
</tr>
<tr>
<td>Code 4</td>
<td>Pocket 6mm or more(black band on probe not visible)</td>
</tr>
</tbody>
</table>

### 3.5 STATISTICAL ANALYSIS

The statistical analysis was carried out using both SPSS and SAS packages. Z-test and chi-square tests were used.

### 3.6 ETHICAL APPROVAL

Informed consent was obtained from all subjects participating in the study. The ethical board, scientific committee of the Faculty of dentistry, Sebha University, Sebha, Libya approved the protocol of the study.
Figure - 1

CPITN-C PROBE