Objective: To determine the frequent post insertion complaints associated with removable dental prostheses. Furthermore, we planned to identify which type of removable dental prosthesis is related to more complaints.

Material & Methods: This study was a survey on 30 consecutive patients wearing removable dental prostheses. Data were collected using a questionnaire and processed in SSPS program version 17 using descriptive statistics for results.

Results: The majority of patients (77%) were 50 years or older, and the majority of complaints were in the partial dentures (70%). The chief complaints were of pain followed by discomfort (73.3%). Complaints were equally distributed between genders.

Conclusion: We found that pain is the most common complaint with removable dentures, and that the post insertion complaint is not gender related.

Key words: Dentures, Post-insertion complaints, Removable dental prostheses

Introduction
Removable dental prostheses are component of Prosthodontics, which denotes the branch of dentistry pertaining to restoration and maintenance of oral functions, comfort, appearance and health of the patient by the replacement of missing teeth and craniofacial tissues with artificial substitute. Removable dental prostheses can be partial or complete dental prostheses. These are usually made up of polymethyl-methacrylate (acrylic) or cobalt chromium (base metal alloy). Acrylic is the most common material used for removable prostheses because it is aesthetically good, light in weight, less expensive, requires shorter fabrication time as well as being easy to repair if required. However, it has some limitations such as greater durability and longer patient’s adaptation time. During this adaptation time the patient may present with post insertion complaints of various types. Despite the decrease in tooth loss, the need of Prosthodontic treatment remains high.

Lack of conservation of tooth structure in conventional fixed prostheses and high cost of modern treatment modalities such as implants supported prostheses has limited the options available for patients, who are reluctant for tooth reduction or have socio-economic constraints. Eventually, in the modern era of development and patient awareness, the removable dental prostheses still outnumber the implant supported prosthesis in some parts of the world. However, it is relatively uncommon that a discussion or research is carried out on complaints related to removable dental prostheses. Complaints with the removable dental prostheses may arise due to many factors such as thick or over extended denture flange, loose or tight fitting denture, occlusal interference or frenal impingement. Pain may occur due to overextended borders, impingement of clasp and entrapment of movable tissues. Discomfort may occur when patient has disturbed occlusion. Loose denture can be due to poor seal or over extention. If these complaints are not addressed properly it will lead to patient disappointment and ultimately removable dental prostheses failure. These complaints can be avoided and optimally managed by making sure that patient’s expectations are satisfied and understood, for which frequent follow-ups are recommended. The dental clinician should know that removable dental prostheses placement is not the final patient-clinician encounter. Determining the common complaints by the patients will be helpful in ensuring a good clinical outcome. Very few studies to assess the complaints associated with acrylic dentures have been conducted in Pakistan. The current study was carried out to find common complaints of patients wearing removable dental prostheses visiting the Prosthodontics department of a teaching hospital. This study will add to the existing literature and will aid in dental education and training. It will also improve awareness of a dental clinician about common post insertion complaints and help them in their management.

Objectives
To find most frequently occurring post insertion problems after acrylic removable dental prosthesis insertion
• Frequency of complaints in upper or lower removable dental prostheses both partial and complete and their association with the patient’s gender

Material & Methods
This descriptive survey with convenient sampling was done on 30 patients wearing removable dental prostheses who came to the Department of Prosthodontics of the teaching hospital with post insertion complaints in the months of April and May 2013. These patients were presenting for the first visit within the first month after the insertion of removable dental prostheses. The assessment of all post-insertion complaints was done by one clinician.

Inclusion criteria
• Patients with partial or complete removable dental prostheses in upper or lower arch, which were inserted within the past one month (30 days).
• Polymethyl methacrylate (PMMA) removable dental prostheses

Exclusion criteria
• Patients under 20 years of age because we believe that these may not accurately represent the majority of the denture wearing population.
• Patients who could not accurately describe their complaints (language, or speech limitation) and patients with disability (mental or physical).

The questionnaire included information on age, gender, type of denture, chief complaint and place from where the denture was fabricated. This was followed by a clinical examination. The data were entered and processed in SSPS program version 17 and descriptive statistics (number and percentages) were calculated.

Results
Out of the 30 patients studied, 15 were males and 15 were females. The majority of patients were 50 years or above, 46.7% were 60 years or above and 30% were between 50-60 years, whereas 23.3% were under 50 years of age (Table 1). Out of the 30 patients 90% fabrications of dentures were done in the same hospital and 10% were fabricated in private dental clinics (Table 2).

Table 1: Variations in age of patients wearing removable dental prostheses (n 30)

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 years</td>
<td>3 (10)</td>
</tr>
<tr>
<td>30-40 years</td>
<td>1 (3.3)</td>
</tr>
<tr>
<td>40-50 years</td>
<td>3 (10)</td>
</tr>
<tr>
<td>50-60 years</td>
<td>9 (30)</td>
</tr>
<tr>
<td>60 years and above</td>
<td>14 (46.7)</td>
</tr>
</tbody>
</table>

In removable prostheses types of these patients, 46.7% were lower partial removable prostheses and 10.0% were lower complete removable prostheses (Fig.1). Among total patients 50% complained of pain due to impingement of clasp, overextended borders or sharp edges of the denture and 23.3% complained of discomfort due to disturbed occlusion.(Fig.2)

Discussion
This study shows that most of the complaints are of pain and discomfort due to disturbed occlusion, impingement of clasp, overextension of borders and sharp edges of the denture. Pain and discomfort were noted according to the subjective explanation of the experience by the patient. In this study of 30 consecutive patients for post insertion complaints of removable dental prostheses, no considerable difference on the base of gender was found, which is in agreement with Katayun Sadr study. Furthermore, more complaints in lower removal dental prostheses in their study was observed which is similar to the present study.3
In this study patients reported with more complaints of lower removable partial denture (46.7%), this could be due to smaller sample size. However this is comparable with the reports of a Korean study and a local study both of which concluded that the patients with removable partial dentures have lower quality of life ratings and have more complaints as compared to patients with complete dentures. A Russian study reported that patients with RPD have lower quality of life as compared to all other treatment modalities used for replacement of partially missing teeth. However one local study done only on RPD reported high patient satisfaction with the removable dental prosthesis. Removable dental prostheses are entirely dependent on teeth, mucoperiosteum and bone for their support. The tongue also plays an important role in the success of lower dentures. At times new removable dental prostheses get dislodged due to tongue size and activity. Especially in edentulous areas the tongue can get enlarged and contraction of mylohyoid muscles raises the floor of mouth; resulting in dislodgement of a denture. This may explain greater number of complaints in the lower removable dental prostheses. In the present study, pain in the denture bearing area was reported by 50% of the patients which was clinically related to impingement of clasp, thick or over extended border and sharp edges of dentures. The second common complaint observed was discomfort (23.3%), due to disturbed occlusion. Incorrect occlusion is one of the most common errors in denture fabrication. A study done by Bilhan H et al reported that out of 99 patients reporting for complications of removable prosthesis only 2% had desirable vertical dimension and 38.4% had incorrect centric relation. Disturbance in occlusion may be attributed to the inherent polymerization shrinkage of the acrylic resulting in changes of artificial tooth position in relation to the denture base, improper processing of the dentures in the laboratory. An Iranian study on removable denture wearers reported that 27% of RPD wearers had interrupted meals and 24% had discomfort. Loose dentures were complained by 13.3% of the patients in this study. This was due to loose clasps in partial dentures, poor adaption of the denture bases in the distal extension saddles and overextended borders of complete dentures. According to Kiviak et al, dentists tend to extend denture flanges as much as possible to overcome the retention problem, his study reported that the highest frequency of injuries were seen in borders and flanges in the retro mylohyoid area (48.6%), the buccal sulcus adjacent to the buccal shelf (9.8%), and the retro molar pad (9.5%). Furthermore these were in the lower removable dental prostheses the finding which also support our study. The observations in the present study are however in contrast to a Turkish study where the most common complaint by 64.6% patients was of loss of retention and 47.5% complained of irritation and ulceration. This difference with the present study could be attributed to the fact that their study population consisted of old denture wearers with minimum of 3-year denture wearing experience, whereas current study only included patients in their initial adjustment phase. This explanation is supported by a German study which compared the complaints of Prosthodontic patients over time and reported that the number of complaints reduces as the time passes.

Post insertion complications can arise due to poor diagnosis, incorrect treatment plan and denture design. Therefore emphasis should be laid upon development of skill in the clinical steps, like, careful designing of the denture, improved impression technique with adequate border molding, good occlusal records, and careful denture trial and insertion followed by scheduled post insertion visits. Attention should be paid on accurate reproduction of the denture design, proper placement of clasp arms, careful occlusal setting and adjustment and careful finishing and polishing of dentures. Patient’s acceptance and motivation to use the removable dental prosthesis also play a significant role in success. Thus it is important that patients are rigorously counselled during the fabrications process that they will need to come and get the post insertion complaints resolved.

**Limitations of the study**

This study was carried out on both of partial and complete removable dental prostheses. In future, studies may be carried out separately on partial and complete removable dental prostheses to find out the problems related to each in more detail. Furthermore, the number of patients in this study was limited. This was a pilot study to find out the prevalence of the common issues and a new study should use this data to determine the sample size.

**Conclusion**

The most common post-insertion complaint of removable dental prostheses of both complete and partial was pain followed by discomfort reported in the lower removable partial denture and this is unrelated to gender. Identification of post insertion complaints in different types of prosthesis would help developing protocols to prevent and manage these more effectively in a busy tertiary care set up.

**Conflict of interest**

This study has no conflict of interest as declared by any author.

**References**


