

## Euro Dental 2018: Fixed restorations preferred by the dentists of Lahore, Pakistan

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**Objectives:** The study objectives were to assess the preferences and trends about fixed restorations in dental practice.

**Introduction:** Different type of restorations is being used in dentistry for partial or fully lost tooth, An artificial tooth is called as pontic, it can be removable or fixed, composed of different type of material according to the need and properties.

Dental restorations can be divided according to the material used. Porcelain fused to metal (PFM), Metal-acrylic, All Ceramic and All Metal restorations. From eighteenth to nineteenth century, dental restorations were developed with the introduction of feldspathic materials. This material was used in the anterior region in the form of jacket crowns which led to the evolution of all ceramic restorations. These restorations were excellent in esthetics but weak in strengths. These materials were further developed afterwards. A new system was also introduced in dentistry that uses metal to increase the strength of the porcelain to produce feldspathic ceramic fused to metal copings which accommodate the defects and requirements.

PFM restorations have represented the “gold standard” for restorations. They are predictable, easy to fabricate, economical and they help to obtain good prognosis. PFM also have some limitations about esthetics. It reflects excellent clinical results, ease of casting procedures and excellent final results. PFM is good in strength and esthetic when compared to the acrylic resin veneers which were used previously.

It has been reported that a large number of failure of acrylic resin veneer retainers was due to:

- i. Poor esthetic
- ii. Wear or corrosion resistance of resin

iii. On another side, porcelain is more brittle than the resin

iv. Sometimes porcelain can fracture in result of sudden impact or its debonding from metal can result due to improper mechanical bonding

It has been noted that enamel wear of opposing by porcelain is greater than gold restorative materials, resin or amalgam. Although abrasive proportion is different among different type of porcelain. It is recommended that after occlusal adjustment the porcelain restoration should be re-glazed or carefully polished to avoid abrasive surface of the porcelain.

Gold was the best option for the restorations on premolar and molar with good results in 1990s. But at present, gold is rarely used due to its cost. Base metal alloys are frequently used for the fabrication of all metal crowns. These crowns are mostly used at posterior teeth. All metal important role to restore missing or decayed teeth during past decades.

But their use is limited now a days due to some drawback of caries, esthetics and marginal adaptation which leads to crown failure.

Dentistry has evolved new materials and techniques to overcome the requirements with excellence. The involvement of CAD/CAM (computer aided design and computer aided manufacturing) and zirconia substructures for metal free restorations, all ceramic restorations have become easier to fabricate with perfection. Modern dentistry has changed the trends which are more precise and accurate with excellent esthetics according to requirements. Preferences of dentists are getting changed from single unit of PFM to all ceramic due to its availability and improved mechanical properties. New materials and processing techniques are being introduced in fabrication of

indirect restoration which have improved the results and helped a lot to improve the quality of life

The choice of material depends upon mechanical and aesthetic concerns, availability of material, patient and dentist preferences. Different studies have been presented in the United Kingdom (Farrel T.H & Dyer M.R 1989) and Australia (Aust Dent J 2000) on the treatment and providing patterns of crowns. In England and Wales PFM crowns were given 94.7 percent of all crowns and is the most frequently used followed by all porcelain (i.e. 2.9 percent). The same trend has been observed in Australia with PFM being the mostly prescribed (82.9 percent) followed by all porcelain crowns (8.2 percent)

Similarly in this study evaluated type of crowns including PFM, all ceramic and all metal were preferred by dentists. Dentists from Lahore have also been lenient towards abutment type. Trend shifts towards implantology among the young dentists but conventional crown and bridges still have their importance in dentistry. PFM is the choice of treatment for the restoration of missing teeth, good aesthetic and durability. It gives excellent results in affordable price range. So, it becomes a perfect choice for both dentists as well as patients. All Ceramic Crown is being the choice for anterior for excellent esthetics. But it is not being considered due to its high cost. There are some dentists that are using All Metal Crown on posterior as well.

**Material and methodology:** A self-generated questionnaire was circulated to the dental clinics of differ-

ent private and public sectors of Lahore.

**Results:** Most of the dentists were satisfied with the use of PFM by the conventional method. On anterior teeth 39% dentists were willing to use implant as an abutment and 61% preferred conventional fixed partial denture prosthesis. Similarly on posterior teeth 33% dentists preferred implant supported prosthesis, and 66.5% were satisfied with fixed partial denture prosthesis. With respect to material 47% dentist said that they prefer PFM on anterior and 52.5% dentists agreed upon all ceramic crowns. Similarly on posterior teeth according to material 86.5% dentists preferred PFM, 3.5% dentists all ceramic and 10% all metal crowns. For excellent esthetics 19.5% dentists were satisfied by PFM crowns and 80% dentists said they will use all ceramic crowns. From economical point of view 58.5% dentists were satisfied by PFM and 41.5% dentists said all metal crown is more economical. From characteristics on anterior teeth 82% dentists prefer esthetics, 11% marginal adaptation and 7% prefer longevity. Characteristics for posterior 74.5% dentists prefer occlusal strength and 89.5% prefer marginal adaptation.

**Conclusion:** PFM is used across the globe for anterior and posterior restorations; this study showed that PFM is the choice of the crown on anterior and posterior teeth in private as well as public dental practice due to its excellent mechanical properties and economical reason.

**Key words:** fixed restorations, preferences, Dentists of Pakistan, PFM, ceramic, metal