

## Systematic review of comparison of different impression materials and techniques of dental implants at the second stage of procedure

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**Introduction:** The accuracy of the removable or fixed superstructures of dental implants is influenced by the impression techniques and materials. This study is a systematic review looked at the comparison of the accuracy of different impression materials and techniques used in the second stage of the dental implant treatment in vivo. PICO FRAMEWORK

P- Implant impression techniques and materials, I- Comparison of accuracy, C- Literature review of scientific databases, O- Systematic review to facilitate knowledge sharing and avoid/minimize the errors in impression procedure.

### Method:

**Database searched:** The keywords were searched in scientific databases such as The Cochrane library, PubMed Central, Wiley online library and Google Scholar. The key terms used for the search were dental implants, impression materials, impression techniques, accuracy and success.

**Eligibility Criteria:** The inclusion criteria for the systematic review were observational studies pertaining to the accuracy of implant impression materials and techniques, conventional impression technique, impression taken with implant fixture, conducted in the mandibular arch for partial edentulousness and age group of 30 to 50 years. Exclusion criteria formulated were complete edentulousness, Digital impression technique, dual arch impressions and All-on-four technique.

### Result:

**Search Strategy:** A thorough screening of the literature obtained, omitting the duplicates were performed for a total of 248 literature. Only 18 literature were found relevant to the topic of interest.

**Conclusion:** It has been concluded that among the impression materials, polyvinyl siloxane exhibits a slightly dimensional accuracy of impressions when compared to polyether. Among the impression techniques, open tray technique and splinted technique impression method produces a more dimensionally accurate impression, provided the implants are parallel or with lesser axial angulation, and appropriate coping shapes are selected.

### Biography

Hussameldien Hussien is currently pursuing his Diploma in Implant Dentistry through the FGDP, UK while working as GDP in Manchester, UK. He has completed his MSc in Restorative and Aesthetic dentistry from the University of Manchester in 2017. He is a Member of the RCS Edinburg and FGDP UK. He pursued BDS from Ribat University, Khartoum, Sudan in 2010. He is also the Dental Lead in Sudanese Junior Doctor Association (SJDA). He is an active Member of Sudanese Medical Association (SMA).

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