

**ABO BLOOD GROUPING FROM HARD AND SOFT TISSUES OF TEETH BY
MODIFIED ABSORPTION-ELUTION TECHNIQUE**

ABSTRACT

AIMS AND OBJECTIVES

1. To determine the blood group from pulp and dentin, from the extracted teeth by modified absorption-elution technique and to correlate the results with the reference sample which was obtained by slide agglutination method
2. To evaluate the reliability of teeth stored for a period of 4-6 months as a source of blood group substances.

MATERIALS AND METHODS

The present study was conducted in K.S.R Institute of Dental Science and Research, Tiruchengode, where the extracted teeth were collected from patients who underwent dental extraction procedure. Hundred clinically sound human permanent teeth were collected randomly along with the respective blood samples from patients with age ranging 11-70 who reported for extraction due to orthodontic treatment procedure and poor periodontal status. The study was divided into two groups: Group I (freshly extracted teeth) comprised of 50 teeth, which were analyzed within a period of a week. Group II (teeth kept for long period of time in soil) comprised of 50 teeth that were collected and kept for a period of 4-6 months and then analyzed. The method used to determine the blood group from teeth was modified absorption elution technique

RESULTS

In Group I (n = 50), when pulp was compared with the reference, 46 teeth showed positive results and the sensitivity of pulp in comparison to blood was found to be 92%. Dentin when compared with blood, 41 teeth showed positive results and the sensitivity was 82%. Teeth (pulp +dentin) correlated in 39 samples with a sensitivity of 78%. In Group II (n = 30), for pulp, 39 samples showed positive results and eleven showed negative result with a sensitivity of 78%. Comparison of dentin with blood showed 21 samples correlating reference group with a sensitivity of 42%. Complete correlation for teeth was seen in only 21 samples with 29 negative negative results showing a sensitivity of 42%.

CONCLUSION

In this study, we conclude that if teeth are the only source of identification of a person in forensics, pulp tissue is more significant. Though dentin also possesses blood group antigens, results may not be reliable. Though there are many methods to determine the blood group antigens in teeth, this method is less expensive and does not require sophisticated equipments