ADHESIVE FIXATION OF OVERLAYS: ANALYSIS OF ERRORS AND COMPLICATIONS (LITERATURE REVIEW) DEPARTMENT OF FACULTY DENTISTRY, "EMU UNIVERSITY," UZBEKISTAN

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Research Objective: To analyze contemporary literature data regarding errors in the adhesive fixation of dental overlays and to determine their impact on the development of clinical complications.

Materials and Methods: A review of domestic and foreign publications from the last 10–15 years focused on the adhesive fixation of ceramic and composite overlays was conducted. Scientific articles, clinical studies, and systematic reviews were analyzed, evaluating:

- Isolation protocols for the operative field;
- Methods of tooth hard tissue preparation (total-etch, selective-etch, self-etch systems);
- Processing techniques for the internal surface of overlays (sandblasting, hydrofluoric acid etching, silanization);
- Selection and properties of composite luting cements;
- Frequency and nature of early and long-term complications. The analysis aimed to identify the most significant risk factors for adhesive bond failure.

Research Results: According to the literature, the primary causes of adhesive fixation failure include:

- Inadequate isolation of the operative field and contamination by saliva or blood;
- Failure to follow etching protocols for enamel and dentin;

- Absence of or incorrect silanization of glass-ceramics;
- Improper selection of adhesive systems and luting cements;
- Excessive thickness of the cement layer. The most frequent complications identified are overlay debonding, microleakage, postoperative hypersensitivity, and the development of secondary caries. Data suggests that strict adherence to the adhesive protocol and the use of a rubber dam (rubber dam) significantly increase restoration longevity and reduce complication rates.

Conclusions:

1. Adhesive fixation of overlays is a high-tech stage of orthopedic treatment requiring strict adherence to clinical protocols.
2. The main errors are related to inadequate isolation and improper preparation of adhesive surfaces.
3. The majority of complications are iatrogenic in nature and can be prevented with correct fixation techniques.