

Art (Atraumatic Restorative Technique) - Minimal Intervention Dentistry for Anxious and Uncooperative Patients

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Dear Sir,

Through your esteemed journal, we would like to draw attention towards the importance of ART-a minimal intervention dentistry for anxious and uncooperative patients. Due to limited resources in under developed countries, the focus of treatment for dental pain was extraction¹. To overcome this obstacle, the public health departments of Tanzania in mid-1980s carried out community based oral health care programs which resulted in the development of ART (ATRAUMATIC RESTORATIVE TECHNIQUE)², which was later authorized by WHO in the annual IADR meeting in 1994³. In ART the decalcified structure of tooth is removed by hand instrument and then the cavity is filled with an adhesive filling material, making it a painless procedure.

Since ART was initially used in field programs as an initiative for the conservation of tooth structure, it is now increasingly used in developed countries in clinical set ups for patients suffering from anxiety of dental treatments, as it does not require local anaesthesia or rotary instrument⁴. A randomized control trial was conducted in Indonesia. It consisted of 403 children, which were randomly divided in two groups, a test group (202 children) treated with ART using hand instrument, and a control group (201 children) treated with MCP (minimal cavity preparation technique) using rotary instruments. The trial concluded that children treated

with ART showed less discomfort as compared to those treated with MCP⁵.

The ART approach does not require any special environment or the availability of dental chair or electricity. It is a minimal intervention technique with maximum prevention and retention of sound tooth tissue. It is helpful in providing restorative oral care to more extensive part of the world. This technique can be used in both primary and permanent teeth. ART sealants have caries preventive effect as the key material is GIC⁶. ART requires very limited instruments such as cotton rolls, excavators, hatchets, probe, carver, articulating paper calcium hydroxide, GIC filling material, petroleum jelly, gloves and mask. Starting with the excavation of caries from excavator and removing any undermined enamel with hatchets, initially near DEJ then towards pulp, in order to reduce discomfort, which occurs while excavating infected dentin near pulp. Proper excavation is then verified with the help of a probe in order to remove any remaining infected dentin, which can lead to secondary caries. The cavity is then washed and dried with cotton wool pellet. A lining of calcium hydroxide is given for pulpal protection if the cavity is deep. The liquid of GIC can be applied as a conditioner for 10-15 seconds, to clean the cavity and occlusal surface with is then washed and dried. The cavity is filled with GIC type 8 especially made for ART. The cavity is slightly overfilled to cover the pits and fissures, then the light pressure is applied with a petroleum jelly coated gloved finger to remove excess material and gain better adaptation of GIC with the tooth structure. Articulating paper is used in order to locate high spots which are removed with carver. The vanish is then applied which acts as a separating medium for GIC with oral fluids. The patient is advised

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not to eat or drink for 1 hour. ART also includes sealing of pits and fissures for the prevention of caries using press finger technique⁷. ART is done in teeth having dentinal caries not involving the pulp, easily accessible carious lesion. ART is contraindicated in cases where there is a history of pain, fistula and swelling⁸.

ART is atraumatic to both patient and tooth. This technique is used in public health programs as a basic oral health care initiative⁹. The limited use of instrument and ease of environment renders this technique to be effectively used in patients with severe anxiety for dental treatment¹⁰.

It is recommended that awareness programmes regarding the technique should be carried out both for the practitioners and the patients so that community will get benefit of the technique.

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