CASE REPORT

Gold Enamel Choumps – A Case report

Sargam D. Kotecha a,*, Y. Deepa Hedge a, Kalpna Chaudhry a, Ramakrishna Yeluri b, Updesh Masih a, Chanchal Singh a

a Department of Pedodontics and Preventive Dentistry, K. D. Dental College and Hospital, Mathura, India
b Department of Pedodontics and Preventive Dentistry, Teerthankar Mahavir Dental College, Moradabad, India

Received 10 February 2015; revised 15 April 2015; accepted 5 May 2015
Available online 28 August 2015

KEYWORDS
Choumps;
Enamel tattoo

Abstract Tooth jewellery has been practiced since time immemorial and has become an increasingly popular trend. This case report provides a brief insight into a kind of tooth adornment/a tooth tattoo on the enamel prevalent in parts of western Uttar Pradesh, India locally known as a ‘Choump’. A tooth tattooed with ‘Choumps’ has extremely low incidence and could be used as an identification trait. Tooth adornment with ‘Choumps’ has been reported in adults however, this is the first reported case of ‘Choumps’ in children.

© 2015 The International Association of Law and Forensic Sciences (IALFS). Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

1. Introduction

The practice of tooth adornment dates back to thousand years and continues to be performed in some contemporary societies.1 Tattooing is an increasingly common form of self-expression, especially in the young adult population. Convenience samples of the general adolescent populations indicate that between 10% and 30% of adolescents or young adults currently have a tattoo and that up to half of non-tattooed young adults are considering getting a tattoo.2 Just like other body parts, the teeth have also held a special place as they have been considered to enhance the facial aesthetics. People have been fascinated by various forms of adornments or tooth modifications to beautify the teeth. In the recent past, tooth jewellery has become popular which in the earlier days was in the form of tooth mutilating process by embedding various precious metals on the teeth. The earliest known evidence of drilling human teeth dates from 7500–9000 years ago around 500–900 AD practiced by the Mayan civilization.3,4 Apart from these, the other civilizations that have shown evidence of tooth adornment are the civilizations in China, India, Southeast Asia, Africa and North America, although the best documented specimens of these activities come from pre Columbian America.5

In the Mayan civilization, jade, turquoise, haematite and other semiprecious stones were embedded on the teeth and other facial parts. Excavation of the Mayan burials has shown that between 38% and 65% of the individuals had their teeth filed or altered.6 The practice of placing precious stones was limited to the elites and individuals who were blessed by the Gods; for the rest grooves in varying patterns were inscribed on the teeth. The ornamental stones including jade were attached with an adhesive made out of natural resins, such as plant sap, which was mixed with other chemicals and...

* Corresponding author at: Department of Pedodontics and Preventive Dentistry, K. D. Dental College and Hospital, Mathura – Delhi N. H #2, Mathura 281001, Uttar Pradesh, India. Tel.: +91 8791712445; fax: +91 565 2530764.
E-mail address: sargam.sargam@gmail.com (S.D. Kotecha).
Peer review under responsibility of The International Association of Law and Forensic Sciences (IALFS).

http://dx.doi.org/10.1016/j.cjfs.2015.05.002
2090-536X © 2015 The International Association of Law and Forensic Sciences (IALFS). Production and hosting by Elsevier B.V.
This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
crushed bones. Many authors believe that tooth adornment or modification would have been a sign of passage into the adulthood as the skull remnants in children below 14 years lacked precious gems. Tooth drilling locally known as ‘Mapandes’ was done for a spiritual purpose among youths from Bali tribes as a religious ritual to indicate the entrance into adulthood through the symbolic act of destroying the six soul enemies such as anger, pride and greed. In Algeria, human remains have shown that they had a practice of inserting a small piece of gold between the proximal surfaces of maxillary anterior teeth for adornment purposes. There has been a citation in the literature regarding teeth being bound together using gold wire in a Roman tomb in Egypt. The authors believe that this may not have been merely for aesthetics but also for masticatory purpose.

Amongst the Chinese, references of the “gold teeth” date back to 7th century AD. The specimens of teeth were decorated by the insertion of several golden inlays into small perforations cut into the enamel of the upper incisors. In certain areas of the Philippines, Bhutan and surrounding countries, the practice of inlaying small gold discs, often multiple, in the labial surfaces of maxillary anterior teeth was prevalent. In India, tooth tattooing is done for religious and social purpose. This form of tooth adornment is called as ‘Choumps’ and is particularly seen in certain tribes of western Uttar Pradesh and Rajasthan, India, specially the Gujjar Tribes, Jaduvanshi Thakurs and Jaat Tribes. The practice of inserting Choumps can be traced back in mythology during the Mahabharat and individuals who have Choumps are thought to be blessed by the god. It is also used by many tribes for branding a particular tribe based on the pattern of the Choump. A tooth tattooed with Choumps has extremely low incidence and could be used as an identification trait. Till date, no reports have been published about the incidence of Choumps in children. Hence, the objective of this case report is to provide a brief insight into the prevalence of a unique type of dental adornment, the gold enamel Choump.

2. Case report

An 11 year old boy had visited the Department of Pedodontics and Preventive Dentistry, K. D. Dental College and Hospital, Mathura, Uttar Pradesh, India for a routine dental check-up. Intra oral examination revealed the presence of gold tattoos, each one was embedded into the maxillary right and left central incisor (11 and 21) and there were also depressions with traces of gold on the distolabial surfaces of 11 and 12 which were indicative of dislodged tattoos. The incisal edges of 11 and 21 were found to be abraded and the patient gave a history of having got his incisel edges filed by a local quack in order to shorten its length (Fig. 1). A detailed history revealed that the patient belonged to the Gujjar tribe and he is a resident of Chatta, Mathura District, Uttar Pradesh, India. Thus, a provisional diagnosis of gold enamel Choump was made as this was a tradition followed in this part of the country.

An intraoral periapical radiograph of the maxillary anterior teeth revealed radio opacities and radiolucency positioned in the enamel or superficial dentine. There was no evidence of any periapical pathology on the intraoral periapical radiograph (Fig. 2). On electrical pulp testing, the teeth responded within the normal range.

3. Discussion

The mouth and face have always held a seemingly intrinsic fascination for the mankind. They have been and continue to be the subject of many oral and written beliefs, superstitions, and traditions and the object of wide range of decorative and mutilatory practices. The motives behind decorating the teeth and

Figure 1  Gold enamel choumps on 11, 21.
perioral tissues have ranged from those associated with aesthetics and beautification to certain more complex ones. Though some of these customs may be detrimental to the health of the patient they are still being practiced due to religious misconceptions or traditions that have been practiced for generations.

Choumps are a rare type of tooth tattoo made in gold and are placed on the tooth enamel, mainly on the labial surfaces of the maxillary anterior teeth. In this practice of enamel tattooing, the tooth enamel of the labial surfaces of the maxillary anterior is engraved with circular patterns using a hand drill and are later filled with gold. They are fitted by the quacks locally known as 'Ferua' (tattoo maker) who visit the villages during festivals. The holes are created in the area of interest by using a hand drill and a piece of gold is hammered against the tooth surface to ensure proper adaptation. The patterns of these tattoos vary among the different tribes. It has also been observed that certain tribes follow more than a single specific pattern. The various patterns that have been noted include a single gold spot tattoo, double gold spot tattoos, triple gold spot tattoos, six gold spot tattoos on each of the upper central incisors or sometimes triple gold spot tattoos on each of the maxillary central incisors and single gold spot tattoos on each of the maxillary lateral incisors.

According to Reichart et al., the two most common methods of mutilation were filing and chipping the incisal edge of the incisors. A third less frequently reported method ablation has been more predominantly observed in the African population. The form of modification depends upon the localization and ethnicity of the individual baring the modification. In the present case report, gold enamel Choumps were found on the incisal edge of 11, 21 and the incisal edge was filed by the quack.

Drilling of the teeth is associated with certain health hazards due to the use of unsterile instruments during drilling, fracture of the crown, pulpal hyperemia, pulpal pathology and subsequent periapical pathology. It may also lead to the accumulation of plaque and cariogenic microorganisms leading to the development of a carious lesion around the adornment. In the present case, since the Choumps were embedded in the enamel or superficial dentine, no adverse effects were noted.

The knowledge of various practices of tooth adornments can be used for enhancing cultural sensitivity and to add to the knowledge of the various social customs practiced amongst various civilizations in different parts of the world. Enamel Choumps patterns prevalent among different communities can serve as a beneficial aid for the Forensic Odontologist/the Pediatric Dentist in the identification of individuals during mass disasters. It is also interesting that those distinct civilisations developed such similar customs even without any mutual contact and despite their vast differences. This could be considered evidence that the need and sense of beauty resides deep within human nature.

Source of funding
Nil.

Conflict of interest
None.

Informed consent
This study was performed after obtaining the informed consent of all participants.

Ethical approval
Informed consent was taken from all the participating individuals.

References