

Knowledge, Attitude and Practise Regarding Use of Chromic Catgut Suture among Dental Practioners.

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Abstract:

Back ground: Catgut suture is a type of surgical suture that is naturally degraded by the body's own proteolytic enzymes. This eventual disintegration makes it good for use in rapidly healing tissues and in internal structures that cannot be reaccessed for suture removal. Catgut suture has high knot-pull tensile strength and good knot security due to special excellent handling features. It is used for all surgical procedures including general closure, ophthalmic, orthopedics, gynecology and gastrointestinal surgery.

Aim&Objective- To asses the knowledge, attitude and practice regarding chromic catgut suture among dental students

Methodology: A random sample of 100 dental practitioners was selected and included for this study. The survey questions focused on knowledge, attitude and practice of chromic catgut suture among dental practitioners. The interview was performed by the author. Variations in opinions and knowledge, attitude and practice were analysed and presented.

Result: This survey observed knowledge, awareness and practise regarding use of chromic catgut suture among 100 dental practioners. 87.6% of the dental practioners are aware of chromic catgut suture and 13.6% of the dental practioners are not aware of chromic catgut suture. In this survey, the dental practioners are more aware that catgut suture is resorbable and promote healing and 13.6% of the dental practioners are unaware about the types and uses of chromic catgut suture in dentistry.

Conclusion:

Unawareness of the dental practioners regarding chromic catgut suture in dentistry may be due to lack of knowledge and practise. This can be improved by continuing dental education programs and highlight the absorbable suture in dentistry

Introduction:

Surgical gut suture is an absorbable, sterile surgical suture composed of purified connective tissue (mostly collagen) derived from either the serosal layer of beef (bovine) or the submucosal fibrous layer of sheep (ovine) intestines. Surgical gut sutures are available in plain or chromic. Plain catgut resorbs quickly in the oral cavity, rarely lasting longer than 3 to 5 days. Gut that has been treated by tanning solutions (chromic acid) and is, therefore, termed 'chromic gut,' lasts longer—up to 7 to 10 days.(1)

It resorbs due to 2 mechanisms. Sutures of biological origin (eg, surgical gut, plain and chromic gut) are gradually digested by enzymes in the tissue, whereas resorbable sutures fabricated from synthetic materials such as polyglycolic acid are hydrolyzed via the Krebs's cycle. Surgical gut suture material is made from animal protein (ie, gut), thus it can potentially induce an antigenic reaction. When used intraorally, this material loses most of its tensile strength in 24 to 48 hours; coating the material with a chromic compound extends resorption to 7 to 10 days, and extends significant tensile strength to 5 days.(2)

Chromic gut is processed to provide greater resistance to absorption, sizes range from 5-0 to 2, Absorption within 90-

120 da,High collagen purity,Accurate polishing ensures smooth tissue passage,Packed in IPA to retain memory & increase pliability,

Uniform chrome content provides required wound support and absorption,(3)

Uniform twist spread along the suture length and controlled drying provide high tensile strength ,tissue biocompatibility and ease of handling, with a focus on minimal knot slippage.chromic catgut suture is indicated for use in general soft tissue approximation and/or ligation, including use in ophthalmic procedures, but not for use in cardiovascular and neurological tissues.chromic catgut suture also involves the creation of a wound, and proper closure of this wound is usually necessary to promote healing(4)

Methods and materials:

A random sample of 100 people among the dental practitioners was selected and surveyed using a questionnaire. The questionnaire study focused on

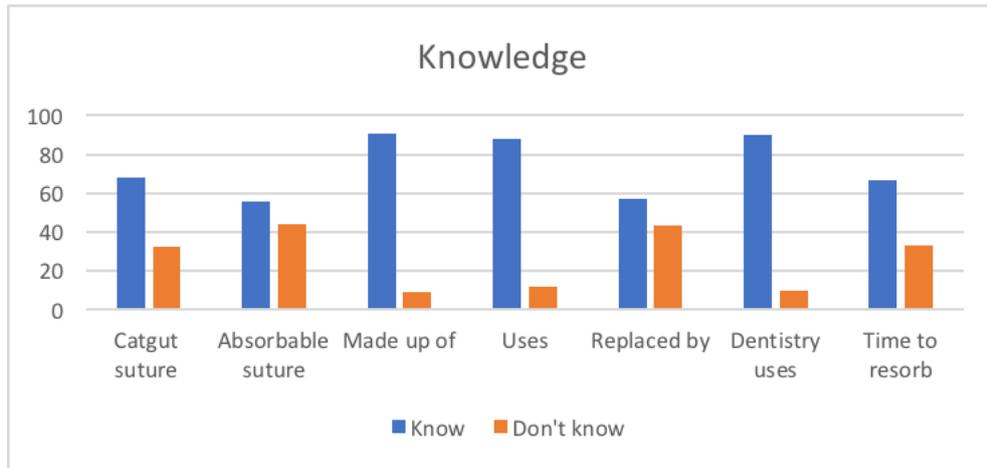
knowledge,attitude and practise of chromic catgut suture among dental practitioners . The interview was performed by the author. Variations in opinions and according knowledge ,attitude and practise were analysed and discussed.

Result:

This questionnaire is based on the Knowledge ,attitude and practise regarding use of chromic catgut suture among dental practioners

Knowledge:

This study showed that the 73.8% of the dental practioners has knowledge about chromic catgut suture.85%of the dental practioners also known about uses of catgut suture and its uses in dentistry .26.7% of the dental practioners doesn't know about chromic catgut suture and its uses .Fig(1)shows knowledge about chromic catgut suture(5)

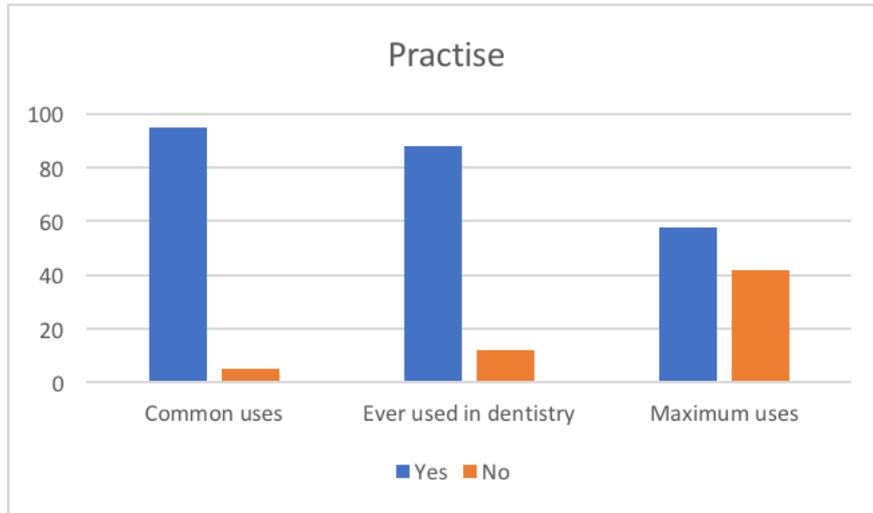


Practise :

This study showed that the 80.3% of the dental practioners has practise about chromic catgut suture.95%Dental practioners also known about common uses of chromic catgut suture and 88% of

the dental practioners used catgut suture in dentistry .19.6%of the dental practioners doesn't used

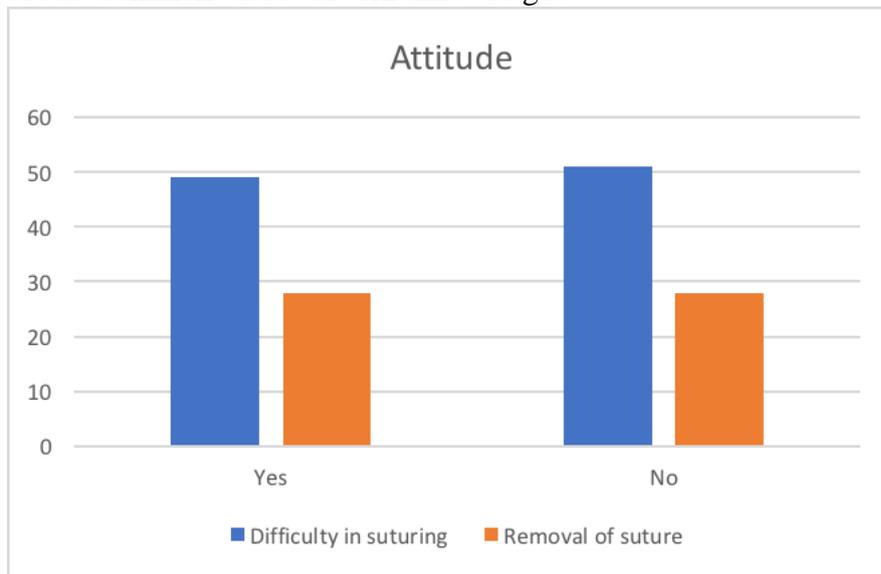
Chromic catgut suture in dentistry. Fig(2)shows practise about chromic catgut suture.(5)



Attitude:

This study showed that the 49% of the dental practioners has difficulty in chromic catgut suture 51% of the dental practioners does not has any difficulty towards catgut suture .28%Dental practioners also known about common uses of chromic catgut

suture and 88% of the dental practioners used catgut suture in dentistry .19.6%of the dental practioners doesn't used Chromic catgut suture in dentistry. Fig(3)shows practise about chromic catgut suture.(5)



Discussion:

Chromic gut is similar to natural catgut sutures except the suture has been treated with a chromic salt solution that helps to reduce the rate of degradation or absorption of the product by the body and maintain a more uniform tensile strength

for wound healing over longer periods of time. Unlike natural catgut chromic gut has a more standardized rate of absorption and there are few factors that can influence this variable. There is still a minimal reaction of the surrounding tissue to the chromic catgut sutures, making it a good option for many different types of

surgical procedures. More than 87% of dental students are aware about chromic catgut suture.

Chromic catgut suture is the absorbable suture and 82% of dental students are aware. These findings are consistent with the other studies reporting Catgut suture is absorbable suture.(1-5)

EnglerRJ,Weber studied about chromic catgut suture it shows delayed hypersensitivity reactions to this material are difficult to diagnose post-operatively-In this study, 87%of dental practitioners are aware that delayed hypersensitivity reactions to this material are difficult to diagnose post-operatively(6)

Other studies reveals that uses of catgut suture in dentistry such as absorbable,ease to use .90%of dental students were aware of uses of chromic catgut suture in dentistry.

Rogers studies shows that 46% aware that catgut suture is made up of bovine and ovine .In this study 78% of dental students are aware that catgut suture is made up of bovine and ovine.(7)

Grier and Ron.L study in 1992 shows that 65%absorbable suture has been successfully used for deep sutures in hepatic, renal and splenic wounds as well as ligation of ovarian and uterine stumps. Absorbable material is commonly used as a continuous subdermal stitch. Plain catgut would be contraindicated, however, due to its in tense tissue reaction underlying the skin.93%of this study shows that catgut suture are use for hepatic ,renal and splenic wounds.(8)

In the analysis of the Mahomed 1989 there was no significant difference between the two groups in short term pain. The meta-analysis of the data provides significant evidence that absorbable suture material (Dexon and Vicryl) is associated with less short term pain, reduction in the use of analgesia and less suture

dehiscence. However, the long term effects of this material are less clear.In this study 87% of the dental practioners are aware of the short term pain reduction of chromic catgut suture (9-10)

Conclusion:

Unawareness of the dental practioners regarding chromic catgut suture in dentistry may be due to lack of knowledge and practise .This can be improved by continuing dental education programs and highlight the absorbable suture in dentistry.

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