



## Case Report

## SURGICEL mimicking a recurrence of a temporomandibular joint chondrosarcoma

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## A B S T R A C T

**Introduction:** The hemostatic agents have increased the bleeding complication in many surgeries. The SURGICEL is a preparation of oxidized cellulose regenerated from alpha-cellulose in an organic solvent, this product has the characteristic of resorbing without having a reaction of foreign body in 4–8 weeks.

**Case presentation:** We report the case of a patient operated on for a chondrosarcoma of the right temporomandibular joint with normal postoperative consequences, nevertheless after 3 months, the patient consulted again for the same symptomatology. To rule out tumor recurrence, magnetic resonance imaging has been requested; which showed a lesion well limited in T1 hypointense and heterogeneous in T2. During the surgical revision, we discover the presence of a reworked fibrous material, this material was the surgicel used for hemostatic purposes during the first surgery.

**Discussion:** Hemostatic agents significantly reduced bleeding complications. But some authors are observed that some substances can persisted after 8 weeks of using, clinical manifestations depend of operative site. The diagnosis is suspected behind an imaging resonance aspect of a lesion well limited in T1 hypointense and heterogeneous in T2, but the discovery of a reworked fibrous materiel when the revision can confirm it.

**Conclusion:** the absence of degradation of the surgicel can clinically mimic a superinfection or even tumor recurrence; imaging guide the diagnosis but only the surgical revision can confirm it.

## 1. Introduction

The hemostatic agents have increased the bleeding complication in many surgeries. The SURGICEL is a preparation of oxidized cellulose regenerated from alpha-cellulose in an organic solvent, this product has the characteristic of resorbing without having a reaction of foreign body in 4–8 weeks, which has considerably reduced the risk of bleeding [1]; nevertheless, in absence a clarified consensus for better using of this product; some authors have been described some side effects. In this case, we report the case of non-degradation of this material at 3 months postoperatively in accordance with the SCARE 2020 criteria [2].

## 2. Case presentation

Ms. J. Z., 61 years old, followed for hypothyroidism under Levothyrox, without any other personal or familial medical history, she was hospitalized in the department of stomatology and maxillofacial surgery for chondrosarcoma of the temporomandibular joint. During the surgery a bleeding has happened, it was necessitated using of the surgicel to stop it, the surgeon is used to use it in many surgeries specifically the temporomandibular joint surgery. The immediate postoperative course

was without abnormality. The patient consulted again 3 months after the operation for the same symptomatology, an MRI was performed showing a well-limited lesion in T1 hypointense and heterogeneous in T2 (Fig. 1). Faced with these findings, tumor recurrence was suspected and therefore surgical revision was indicated during the recovery, we noticed the presence of a reworked fibrous material; it was the unabsorbed SURGICEL, which was used during the first hemostatic procedure (Fig. 2).

## 3. Discussion

The hemostatic agents accelerate the hemostatic cascade, they are largely used in many surgeries. They can be classified into: absorbable agents, biologically-active agents, dual agents (absorbable and biologically-active constituents), and adhesives [3]. The recommendation of application is not clarified but some authors describe the time hemostasis is between 4 and 15 minutes [3]. The SURGICEL is an absorbable agent, it is a preparation of oxidized cellulose regenerated from alpha-cellulose in an organic solvent, this product has the characteristic of resorbing without having a reaction of foreign body in 4–8 weeks [4,5]. Admittedly it's has considerably reducing hemorrhagic

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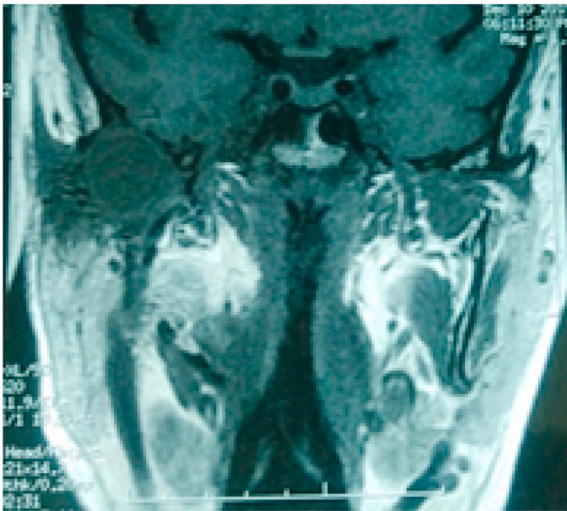


Fig. 1. Coronal T1-weighted MRI scan showing a hypodent lesion of the right temporomandibular joint.



Fig. 2. Intraoperative appearance of SURGICEL not absorbed.

complications, except that authors had reported cases of foreign body reactions, cases of superinfection, inflammation, giant cell granulomas [6,7] and cases of non-degradation of the product. The diagnostic of this last situation depend of operative site, and it is suspected behind a magnetic resonance imaging aspect of a hypointense aspect with clear contours in the T2 sequence. Confirmation is easy intraoperatively and in particular to rule out superinfection, abscess, or recurrence.

#### 4. Conclusion

Hemostatic agents significantly reduced bleeding complications. However their use must be well justified in the absence of a well-informed consensus of use; we report in this the non-degradation of the frozen food, in order to improve the use of this product.

#### Ethical approval

The study committee of the jura sud hospital center approves the favorable opinion to publish this work.

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#### Author contribution

Dr. AF, analysed and performed the literature research, Pr. SF performed the examination and performed the scientific validation of the manuscript. Azami Hassani fatema ez-zahrae was the major contributors to the writing of the manuscript.

#### Registration of research studies

Name of the registry:

Unique Identifying number or registration ID:

Hyperlink to your specific registration (must be publicly accessible and will be checked):

#### Guarantor

Dr Azami Hassani Fatema Ez-zahrae.

#### Consent

The consent to publish this information was obtained from study participants. We confirm that written proof of consent to publish study participants are available when requested and at any time.

#### Availability of data and material

The datasets in this article are available in the repository of the maxillofacial database, Chu Ibn-Rochd Casablanca, upon request, from the corresponding author.

#### Declaration of competing interest

The authors state that they do not have competing interests.

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