INESSS
LE SAVOIR PREND FORME

OCTOBER 2022

Vistaseal™ – Intraoperative bleeding

English summary

Une production de l'Institut national
d'excellence en santé
et en services sociaux (INESSS)

Québec

SUMMARY

Vistaseal™ – Intraoperative bleeding

Mandate

At the request of the manufacturer, Johnson and Johnson Medical Companies, the Institut national d'excellence en santé et en services sociaux (INESSS) evaluated Vistaseal™ (human fibrin sealant) for its inscription on the *Liste des produits du système du sang du Québec* for the following indication: "in adults for supportive treatment in surgery for improvement of hemostasis, and for suture support in vascular surgery, where standard techniques are insufficient".

Evaluation approach

Literature data and data provided by the manufacturer were reviewed to evaluate the efficacy and safety of the human fibrin sealant Vistaseal™. Contextual and experiential data from an online survey and expert consultations are presented as well.

Populational dimension

Multiple tools, techniques and products are used to manage surgical bleeding. Fibrin sealants are among the products used when conventional manual techniques are unsuitable, for example, because of the location of the bleeding, or are insufficient to achieve hemostasis. The types of surgery for which a fibrin sealant may be useful have not been circumscribed. Therefore, the target population for this product is potentially vast.

Although several other products and techniques are available for the requested indication, the direct comparators for Vistaseal™ for this evaluation are the other fibrin sealants on the *Liste des produits du système du sang du Québec*, namely, Tisseel™ and Evicel™. Evicel™ is currently distributed as a source of thrombin but could potentially be withdrawn from the market by the end of the year.

In a surgical setting, there is a health need for an effective and easy-to-use adjunctive hemostatic agent with a favourable safety profile for the managementof persistent bleeding despite the use of conventional techniques. In the current context, the needs to be met are limited.

Clinical dimension

The main efficacy and safety data for Vistaseal™ fibrin sealant come from 4 randomized controlled trials and a network meta-analysis. Although the overall evidence was considered to be of moderate quality, several biases were identified that limit the significance of the results.

Efficacy

- Vistaseal™ is effective in providing hemostasis in the context of vascular surgery, liver resection and soft tissue surgery compared to manual compression and Surgicel™.

Safety

- The safety profile of Vistaseal™ is considered satisfactory and comparable to that of the other fibrin sealants.

Expert perspective

- The experts believe that the positioning of the product as a hemostatic agent is not representative of the practice in Québec, where fibrin sealants are used mostly as tissue glues. They find the lack of data for evaluating the efficacy of Vistaseal™ in this context unfortunate.
- The experts consulted also regret the lack of comparative data for evaluating the hemostatic efficacy of Vistaseal™ relative to other hemostatic agents with a similar application. However, they feel that the available studies are sufficient to demonstrate the efficacy of Vistaseal™ as a hemostatic agent.

Other considerations

Although the fibrin sealants share similar characteristics, they differ slightly in terms of product composition, approved indications and recommended clinical uses.

The fibrin sealants Tisseel™ and Evicel™ have not been evaluated by INESSS. However, both of these products have a long history of use in a wide variety of surgical contexts.

Since the use of blood products available through blood banks is not subjected to strict indication verification, there is a risk of clinical uses outside the indications recognized by Health Canada.

Deliberation concerning therapeutic value

Most of the members of the Comité scientifique de l'évaluation des médicaments aux fins d'inscription who exercised their right to vote are of the opinion that the therapeutic value of Vistaseal™ fibrin sealant should not be recognized in adults as supportive treatment in surgery for improvement of hemostasis or as suture support in vascular surgery, where standard techniques are insufficient

Arguments for the majority position

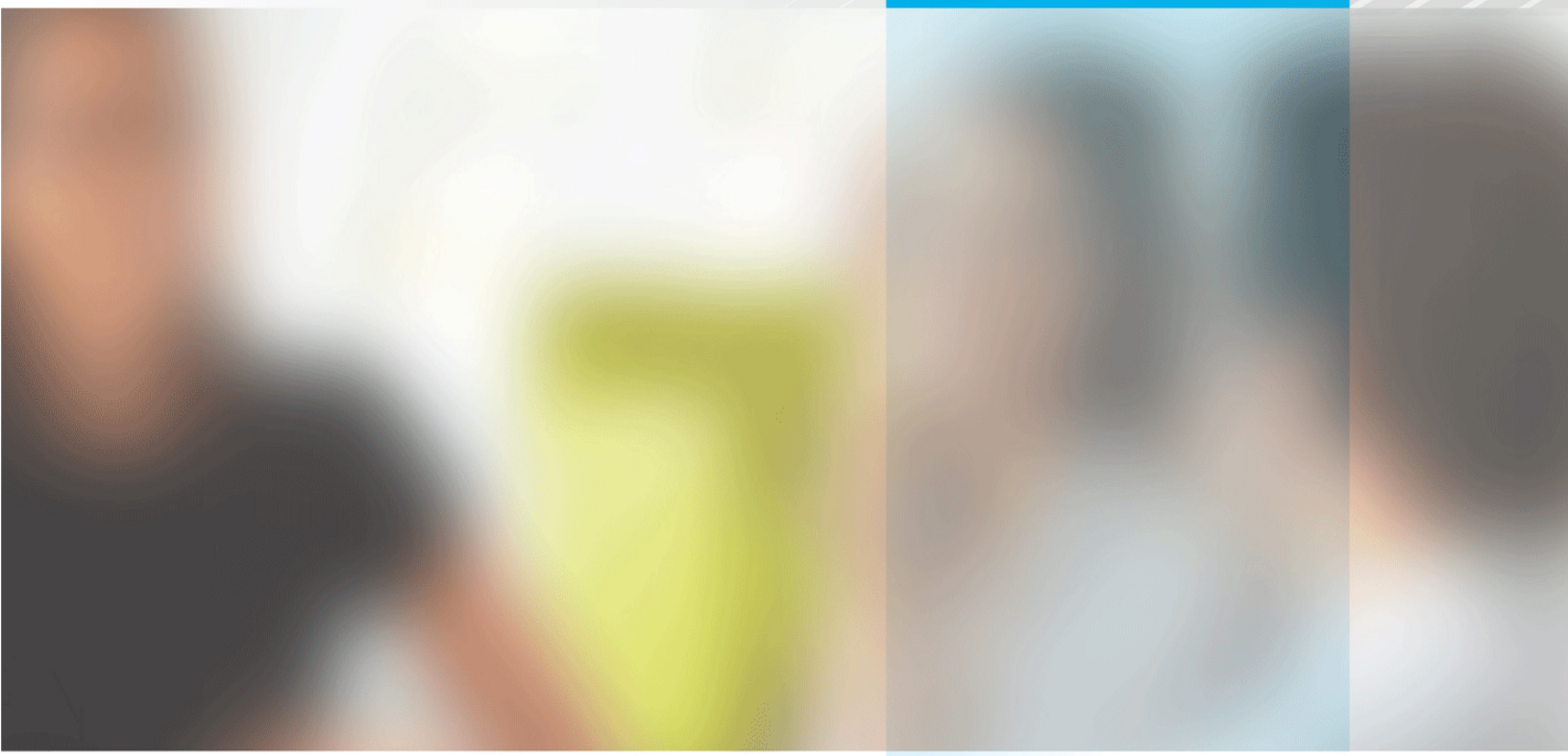
- The members felt that the health need for hemostasis in surgery is adequately addressed.
- In this context, the demonstration of the value of a therapeutic alternative must take into consideration the quality of the evidence for establishing the equivalence of efficacy and safety relative to those of the comparator products. However, most of the members found the evidence presented insufficient in several respects, including the following:
    1. The clinical relevance of the primary efficacy endpoint: An interproduct comparison based on a hard endpoint would have been more appropriate, particularly in a single-blind design. An endpoint such as blood product transfusion utilization reported by type of surgery would have been possible;
    2. The relevance of the direct comparator: A direct comparator such as a fibrin sealant would have been more informative for assessing therapeutic equivalence. Such comparators were available at the time of the clinical studies of Vistaseal;
    3. The product's composition: The uncertainty surrounding the comparability of fibrin sealants in the absence of a direct comparison is exacerbated by certain distinct characteristics of Vistaseal™, such as not containing any factor XIII or aprotinin.

Arguments for the minority position

- Some members felt that the available data support the non-inferiority of Vistaseal™ relative to the other fibrin sealants and that the reported limitations do not justify opposing its inclusion as a competitor.

INESSS's recommendation

In light of the available data, INESSS considers that adding Vistaseal™ to the *Liste des produits du système du sang du Québec* as an adjuvant treatment in surgery in adults for supportive treatment in surgery for improvement of hemostasis, or for suture support in vascular surgery, where standard techniques are insufficient, would not constitute a fair and reasonable option.



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