

הנדון: עדכון עלון לרופא עבור התכשיר Defitelio®

ההתוויה המאושרת:

Defitelio® is indicated for the treatment of severe hepatic veno-occlusive disease (VOD) also known as sinusoidal obstructive syndrome (SOS) in haematopoietic stem-cell transplantation (HSCT) therapy. It is indicated in adults and in adolescents, children and infants over 1 month of age.

החומר הפעיל: defibrotide 200 mg/ 2.5 ml

רופא/ה, רוקח/ת נכבדים,

חברת מדיסון פארמה מבקשת ליידע על עדכון העלון לרופא לתכשיר Defitelio®. העדכון מתייחס למנגנון הפעולה ע"פ נתונים שהצטברו, בסעיף 5.1. להלן השינויים המהותיים:

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: other antithrombotic agents; ATC code: B01AX01.

Mechanism of action

In vitro, defibrotide Defibrotide is an oligonucleotide mixture with demonstrated antithrombotic, fibrinolytic, anti-adhesive and anti-inflammatory actions. The mechanism of action is multifactorial. It primarily acts through reducing excessive endothelial cell (EC) activation (endothelial dysfunction), modulating endothelial homeostasis as well as restoring thrombo-fibrinolytic balance. However, the exact mechanism of action of defibrotide is not fully elucidated.

Defibrotide has been shown demonstrated antithrombotic and fibrinolytic effects *in vitro* and *in vivo* by: increasing systemic tissue factor pathway inhibitor (TFPI), tissue plasminogen activator (t-PA) and thrombomodulin (TM) expression; decreasing von Willebrand factor (vWF) and plasminogen activator inhibitor-1 (PAI-1) expression; and enhancing the enzymatic activity of plasmin to ~~bind~~ hydrolyse fibrin clots.

In vitro and in vivo studies have demonstrated that defibrotide inhibits leukocyte and platelet adhesion to various sites on vascular endothelium by: suppressing P-selectin and vascular cell adhesion molecule-1 (VCAM)-1; interfering with lymphocyte function-associated antigen 1-intercell adhesion molecule (LFA-1-ICAM) mediated leukocyte transmigration; and increasing nitric oxide (NO), Prostaglandin I2 (PGI2) and Prostaglandin E2 (PGE2).

In vitro defibrotide demonstrates anti-inflammatory effects that are involved in cell regulation, providing a stimulus that attenuates the release and production of reactive oxygen species and inflammatory mediators such as interleukin 6, thromboxane A2, leukotriene B4 and tumour necrosis factor- α (TNF- α).

Defibrotide protects ECs from damage and promotes protection of activated endothelial cells. Defibrotide has also been shown to protect endothelial cells from tissue homeostasis by decreasing fludarabine-mediated apoptosis, of EC while ~~not impacting~~ maintaining its anti-leukemic effect. Defibrotide also inhibits and by inhibiting the expression of heparanase, shown in *in vitro* and *in vivo* studies respectively contributing to



extracellular matrix integrity and thereby tissue homeostasis. It is postulated that these actions protect endothelial cells.

Also, *in vitro*, defibrotide has been shown to increase tissue-type plasminogen activator (t-PA) function and decrease plasminogen activator inhibitor-1 (PAI-1) activity resulting in a decrease in procoagulant activity and an increase in the fibrinolytic potential of endothelial cells. Defibrotide also has been shown to have a weak profibrinolytic activity *in vitro*.

The pathophysiology of VOD is multifactorial and complex. Both endothelial cell damage and prothrombotic hypofibrinolytic state are critical factors in the pathophysiology of this disease.

Whilst the mechanism of action of defibrotide has not been fully elucidated, *in vitro* data support a role for defibrotide in both endothelial cell protection and the restoration of the thrombo-fibrinolytic balance. However no pharmacodynamics effects from defibrotide have been identified *in vivo*.

העלון לרופא נמצא בקישור וכן נשלח לפרסום במאגר התרופות באתר משרד הבריאות וניתן לקבלו מודפס על ידי פניה לבעל הרישום.

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