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Tovo di S. Agata, November 5th, 2010

Messrs
To whom it may concern

Subject: regional citrate anticoagulation (RCA) for CRRT treatment

Dear Friends,

I am pleased to inform you that during this year, we have started the production and distribution of the CE marked 5 liters bag "Citrachoice" for regional citrate anticoagulation (RCA) for CRRT treatment.

In renal replacement therapies, the anticoagulant is responsible for preventing the blood clotting in the filter of the extracorporeal circuit and allowing a long lasting purification which this way is also more effective.

Currently, to prevent coagulation, standard Heparin is used (Heparin Sodium). It reaches patient circulation and facilitates bleeding complications such as thrombocytopenia that could cause serious problems especially to patients with post operative course.

In rare cases regional heparinization is performed, meaning the infusion of Heparin together with the Protamine, which is a protein that can neutralize the effect of the Heparin, before entering the patient's body. This technique is not so common, due to difficult managing.

Low molecular weight Heparin, Hirudin and Prostacyclin are other alternatives to avoid blood clotting, but are not commonly used due to technical/scientific/economical matters.

The anticoagulation treatment made with Citrate seems to be, from a clinical point of view, the most interesting treatment concerning CRRT techniques with blood dilution; It in fact does not reach the patient's circulation, prevents any coagulation event and reduces the concentration of ionized Calcium that is eventually balanced in the patient's body by a continuous infusion of CaCl.

The dialyzers which are suitable for this kind of therapy must have the fourth pump, and for the moment the ones available on the market are the following:

Bellco;
Hospal/Gambro;
Fresenius;
Edwards.

We would like to thank you for your kind attention, remaining at your disposal for any further need or clarification.

Sincerely yours
Paolo Gobbi Frattini
CEO

HAEMOPHARM HEALTHCARE srl

