THE QUEST FOR SAFETY IN THE TREATMENT OF HEMOPHILIA A

HEMOFIL T
ANTIHEMOPHILIC FACTOR (HUMAN)
METHOD FOUR, HEAT-TREATED FROM HYLAND THERAPEUTICS

Dry packed
260°C 10h
VIRAL BIOMBURDEN AND THE HEPATITIS RISK

In 1966, when Hyland Therapeutics introduced the first commercial AHF concentrate, HEMOFIL™ Antihemophilic Factor (Human), its dramatic advantages led to quick acceptance. Because the hemophiliac treated with concentrate could lead a near-normal life, any accompanying risk was considered acceptable.

The chief source of risk in concentrate therapy stems from the possible viral bioburden of the large pools of source plasma from which concentrates are derived. One of the most significant threats is that of viral hepatitis. In fact, that hemophiliacs would eventually contract one or more forms of hepatitis has long been considered inevitable. Even with the most stringent controls, it has not been possible to guarantee that all viral content of donor plasma has been detected. Today nearly every hemophiliac receiving AHF, whether from single donor cryo or large pool concentrate, has evidence of prior infection by at least one type of viral hepatitis.

Viral bioburden is a problem of vital concern to the hemophilia community, and finding a solution has been a long-standing Hyland Therapeutics goal. The introduction of third generation RIA screening has minimized the dangers of hepatitis B, but it has not eliminated them, and the test is not effective for hepatitis non-A, non-B or for any other viral pathogen. The research challenge remains: reduce or inactivate the viral bioburden without affecting AHF efficacy.
THE GOAL:
REDUCED BIOBURDEN
WITH BIOEQUIVALENCE

After extensive exploration of the various routes of attack on bioburden, Hyland Therapeutics developed a heat treatment process that met all its requirements. The result is HEMOFIL® T Antihemophilic Factor (Human).

It is not yet possible to say that HEMOFIL® T concentrate eliminates all danger of hepatitis. But in chimpanzee studies, animals injected with HEMOFIL® T concentrate seeded with 300 chimpanzee infectious doses of hepatitis B before heat treatment showed a marked delay in disease onset. This may indicate that heat treatment reduced infectivity for hepatitis B. The study further indicates that an unknown quantity of non-A, non-B virus(es) present in the administered product was inactivated. In an in vitro study, approximately 3.2 logs of a known quantity of Sindbis virus (a non-human pathogen) were also eliminated, thus providing quantitative information on the amount of this virus that can be inactivated by the Hyland process.

HEMOFIL® T concentrate has full bioequivalence with HEMOFIL® concentrate. There is no compromise to the therapeutic, biological, biochemical or immunological integrity of the product. Thus, by any standard, HEMOFIL® T concentrate is a further step forward in Hyland Therapeutics’ commitment to an improved quality of life for the hemophiliac.
ANTHROPOMORPHIC FACTOR (HUMAN), Method Four, Died Hypertensive, Case 2009-1

The patient of each of the product is given on the container and package label. See instructions given under "PRECAUTIONS AND ADMINISTRATION and Use of Administration" for potency-related administration instructions.

DESCRIPTION

Anthrone Factor (Human), Method Four, Heart-Related, is a collection of a sufficient amount of Anthrone Factor (VI, VII, AH1, AH2) in concentrated form. It is prepared from fresh-frozen human plasma. The product also contains a trace amount of heparin, 1.0 unit (0.01 mg) or less per ml of reconstituted material, as a stabilizing agent. Concentrations of heparin many times greater than this have been shown to demonstrate effect after infusion of the volumes encountered in the use of this product.

A change has been made in the manufacture of this product to include a heating step designed to reduce the risk of transmission of Hepatitis. No precautions have been shown to be totally effective in reducing the risk of transmission of Hepatitis. No precautions have been shown to be totally effective in removing the contaminating factor from Anthrone Factor (Human). (See section on CLINICAL PHARMACOLOGY: CLINICAL STUDIES.)

Anthrone Factor (AH1, AH2) is a protein found in normal plasma and not associated with administration of Anthrone Factor (Human). Heparin is provided to prevent a slow increase in plasma levels of AH1, AH2 and to decrease the heparin concentration in patients with hemophilia A (classical hemophilia) and hemophiliacs who have a deficient factor. The half-life of AH1 administered to hemophiliacs has been found to be 3 to 5 days, while in hemophiliacs, the half-life of the first dose of AH1 appears to be about 4 to 6 days.

Anthrone Factor (VI, VII, AH1, AH2) is free of known antibodies and is not associated with the administration of Anthrone Factor (Human). The product is provided in an increased amount of plasma levels of AH1 and AH2 and the half-life of AH2 is about 2 to 3 days.

The incidence of hemophilia A is approximately 1 in 5000 births, and the incidence of hemophilia B is approximately 1 in 100,000 births.

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