



A hot option for a cold subject

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The patient was a 45-year-old man with Waldenström's macroglobulinemia, who initially presented to his local hospital with severe Type 1 cryoglobulinemia, central retinal vein thrombosis, and partial vision loss. Therapeutic plasma exchange (TPE) was attempted on three occasions without success due to circuit occlusion by a potent cryoglobulin.

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The patient received a 5-day course of fludarabine and was referred to a second medical center for TPE and further chemotherapy. The patient was treated with six courses of R-CHOP; however, repeated attempts at TPE were unsuccessful.

On admission to a third hospital, the patient was weak, short of breath, and pale, with dusky lips and fingers. A cryocrit was greater than 90% (see figure, A, arrow indicates cryocrit at 4°C; also shown is the 37°C control) and exhibited a high thermal amplitude that prevented most routine laboratory testing. The first two attempts at TPE resulted in rapid circuit occlusion (see figure, B, occluded inlet filter) despite hydration with warm saline, insulation of all exposed tubing, blood warmers, and use of heating pads and heated blankets to warm the patient. Subsequent TPE procedures were successful with the addition of forced-air heating blankets for the patient and draped over the apheresis device (see figure, C, bottom). The patient underwent a total of six TPE procedures over 2 weeks with marked improvement in symptoms and a gross decrease in circulating cryoglobulin (see figure, C, top, collected plasma from the first two TPE procedures with visible decrease in cryoprecipitate).

Forced-air heating blankets are commonly used in the perioperative setting and are reportedly more effective than water and electric warming devices.¹ As shown here, forced-air heating blankets can be highly effective in severe cryoglobulinemia, by insulating and preventing cryoprecipitation of extracorporeal blood during TPE.

CONFLICT OF INTEREST

The authors certify that they have no affiliation or financial involvement in any organization or entity with a direct financial interest in the subject matter or materials discussed in this manuscript.

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