



AN HUMAN ALBUMIN (HA) PRESCRIPTION MODEL AS STRATEGY TO MAXIMIZE THE APPROPRIATE USE IN SHORTAGE CONDITIONS

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The hospital pharmacy of a northern Italy center, in accordance with the Good Use of Blood Committee, introduced a nominal form for HA request to evaluate and rationalize the HA clinical-therapeutic demand. It represents a pharmacist-led intervention approach shared by physicians, in favor of an economically sustainable healthcare contrasting the plasma-derived medicinal products (PDMPs) lack.

Background

In Italy, the rising PDMPs demand had to face the international shortage caused by the SARS-CoV-2 pandemic outbreak. The self-sufficiency level of albumin represents one of the National Blood Centre (NBC) main challenge, in view of the health system sustainability.



Prescription criteria were updated according to the most recent guidelines. The cut-off of blood albumin level above 2.5 g/dl has been introduced as eligibility threshold value and for the daily dose calculation, except for HA calculation based on volumes for plasmapheresis and large volume evacuative paracentesis in hepatic cirrhosis. The pharmacy provides a maximum of five days therapy, then a new reevaluation and updating of blood albuminemia was required. 690 total requests were analyzed.

In March 2023, HA consumption was 61400 gr, collapsed by 75% in April and then settled at - 58% in May and June. The most important reductions in monthly requirements affected the surgical (- 75%), intensive (- 62%), internist (- 64%) and gastro-hepatological (- 52%) areas. 97,5% of requests were on-label: 20% for plasmapheresis or paracentesis, 21% for liver failure, 16% for cirrhosis of the liver with refractory ascites. 26% of requests (n = 180) reported in-range blood albumin value, while the 14% was unknown or ongoing because administered in emergency phase. 37% of requests has been evaded even if the blood albumin was > 2,5 g/dl due to mandatory clinical need. Thanks to the new prescription model it was possible to save € 91 752 in the second quarter.



The introduction of the reasoned request allowed to achieve albumin self-sufficiency with voluntary blood donations and reduce the market products purchase. Furthermore, it fostered the clinicians awareness on the HA use appropriateness, considering crystalloids and non-protein colloids as alternative therapeutic strategies as resuscitation fluids.

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