

Review of recombinant activated protein C (rAPC, Xigris®) prescription at a referral hospital : the Lausanne experience

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Background : Several interventions (early goal directed therapy, lung protective ventilation, glucose control, low dose steroids) are recommended to reduce the mortality of patients with severe sepsis and septic shock (Surviving Sepsis Campaign). Administration of rAPC is also included in these guidelines, but the Swiss Society for Critical Care recommended to restrict it to patients with an APACHE II Score ≥ 25 with two or more organ dysfunctions.

Methods : We reviewed all consecutive patients staying in the medical and in the surgical ICUs of our institution treated with rAPC until December 2005. In addition to the swiss recommendations, a systematic review of the indication and check for contraindications was performed by at least two attending physicians before administration of rAPC.

Results : Sixteen patients in septic shock were treated with rAPC over a 32 month period (Table).

	N°	Age	APACHE II	SOFA	Source of infection	Duration	LOS	Outcome
Surgical ICU	1	75	31	4	Peritonitis	49 hrs	22 days	Survival
	2	46	25	3	Burn/VAP	72 hrs	31 days	Survival
	3	63	25	4	Peritonitis	62 hrs	10 days	Survival
	4	34	23	2	Burn/VAP	54 hrs	42 days	Survival
	5	29	26	4	Burn/VAP	72 hrs	209 days	Survival
	6	62	28	4	Peritonitis/VAP	24 hrs	13 days	Survival
	7	70	25	4	Peritonitis/VAP	50 hrs	10 days	Survival
	8	27	36	4	Meningitis	10 hrs	1 day	Death
Medical ICU	9	22	26	4	Meningitis	42 hrs	7 days	Survival
	10	48	18	4	Peritonitis	85 hrs	11 days	Survival
	11	72	22	2	CAP/ARDS	96 hrs	12 days	Survival
	12	23	19	2	CAP/ ARDS	67 hrs	12 days	Survival
	13	72	19	2	Meningitis	96 hrs	9 days	Survival
	14	70	41	4	ARDS/Neutropenia	5 hrs	1 day	Death
	15	32	21	3	CAP/Cystic Fibrosis	96 hrs	40 days	Death
	16	57	26	4	CAP/ ARDS	96 hrs	30 days	Survival

SOFA: Sequential organ failure assessment; LOS: Length of ICU stay; VAP: Ventilator-associated pneumonia; CAP: Community acquired pneumonia; ARDS: Adult Respiratory Distress Syndrome

Only 3 (19%) of them died, as compared to 8 (53%) predicted by a median APACHE II score of 25. Surprisingly, total perfusion was inferior to the recommended duration of 96 hrs (mean duration 64.5 hrs), especially in surgical patients (49.1 hrs versus 72.9 hrs, $p=0.02$), without evident reduction of the efficacy. No hemorrhagic complications were recorded, even in severely burned patients.

Conclusion : In this highly selected subgroup of septic shock patients, the administration of rAPC was safe and may have contributed to an improved outcome. The total duration of perfusion could be reduced without evident lack of efficacy. If confirmed in a larger number of patients, these results may significantly impact on the prescription of rAPC in the future.