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978-1-107-68124-8 — ECMO in the Adult Patient

Alain Vuylsteke , Daniel Brodie , Alain Combes , Jo-anne Fowles , Giles Peek
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ECMO in the Adult Patient

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NOTE FROM THE AUTHORS

This book is about ECMO in the adult patient. The adult patient can be defined in many ways but we have arbitrarily chosen someone older than 16 years and, more importantly in relation to the discussed technology, heavier than 20 kg.

We would like to acknowledge the contributions of: Dr Mindaugas Balciunas, UK; Dr Richard Porter, UK; Dr Mathieu Schmidt, France; and Dr Martin Besser, UK.

ABBREVIATIONS

ACT	activated coagulation time
AKI	acute kidney injury
anti-Xa	anti-factor Xa
APR	activated prothrombin time ratio
aPTT	activated prothrombin time
ARDS	acute respiratory distress syndrome
CO ₂	carbon dioxide
CPR	cardiopulmonary resuscitation
CT	computed tomography
DCD	donation after cardiac death
ECCO ₂ R	extracorporeal CO ₂ removal
ECMO	extracorporeal membrane oxygenation
ECMONet	International ECMO Network
eCPR	extracorporeal cardiopulmonary resuscitation or ECMO-assisted cardiopulmonary resuscitation
ELSO	Extracorporeal Life Support Organization
FiO ₂	fraction of inspired oxygen
HbS	sickle cell haemoglobin
HIT	heparin-induced thrombocytopenia
HLA	human leukocyte antigen
ICU	intensive care unit
INR	international normalized ratio

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List of abbreviations **ix**

LMWH	low-molecular-weight heparin
O ₂	oxygen
PaCO ₂	partial pressure of CO ₂ in the arterial blood
PaO ₂	partial pressure of O ₂ in arterial blood
PEEP	positive end-expiratory pressure
RRT	renal replacement therapy

A PATIENT TESTIMONY: I SURVIVED ECMO

It is somewhat challenging to define with precision what could facilitate your journey to recovery, as there is no precedent in your life. You are intensely searching for an invisible marker, a destination you seek but cannot see on the horizon.

Meeting with some of the doctors, nurses and physiotherapists who looked after me was a very unique and special experience. Being able to put a face to the names I had heard of so often started to anchor me in this part of my life I could not access before. It also allowed me to say thank you in person, a pivotal part of the healing process, because I was physically there, unsupported by any machine and quite well recovered in fact.

Although without any recollection of the hospital, I suspected that I had probably 'recorded' many sounds of intensive care without realizing it. This was confirmed when I was able to hear an ECMO alarm: the reaction, although slow coming, was strong. This is my only memory, my very own, and I do hold it surprisingly dear. It is an oddly reassuring sensation because it acts as the explanation, if not the actual validation, of everything that has happened since. It almost gives a logical meaning to the last 30 or so months of my life.

A patient testimony: I survived ECMO **xi**

Even more noteworthy was the utterly inspired decision to bring me to the bed of a lady undergoing ECMO. This was what I very much needed but was too shy to ask for. I felt overwhelmed and a bit amazed, but I was not frightened in any way. It made me realize how far I had come.

It has proved to be a truly cathartic experience for me. It is vastly important to encourage patients to return, because it is a milestone not only in their journey of healing but in their quest for acceptance too.

Someone told me once that I was brave; I do not think this is true. You either sink or swim. I did not have a choice, that is all. Strangely, it makes things simpler and therefore easier to get on with.

I also believe that you never know what you are really capable of until you are challenged to show it. If you never are, you are blessed, truly.

If, however, the dice is cast the other way, there is still one option left:

Fight back. It is worth it.