

For the first time in Israel: Using Whole Blood to treat the injured in the field

The blood unit that will improve the chances of saving the life of a severely bleeding patients in the pre hospital settings

MDA blood services responded to the request of the IDF Medical Corps, to provide them with Whole Blood units, intended to be given to severely bleeding victims during their evacuation to the hospitals, by Helicopters. In order to achieve that, the Blood Services Automated Blood Typing Laboratory team successfully developed, validated and set up a method for the identification of compatible donors, with low titer of antibodies, suitable to be donors for such special blood units. * The new technology allows to identify O type blood donors that the units they donated are suitable for supply to the Airborne Evacuation Unit of the Airforce. * MDA Director General, Eli Bin: "The Automatic Blood Labeling Laboratory in MDA Blood Services stands in the forefront of technology, aligning itself with the leading countries in the field of Transfusion Medicine."

[Click here to download an explanatory video clip regarding "Whole Blood"](#)

For the first time in Israel: using whole blood, type "O", with low antibody titer, to save the injured who are bleeding in the field. The IDF Medicine Corps has led an effort, in cooperation with the team of the Blood Automated Blood Typing Laboratory in MDA Blood Services, headed by Moshe Zadok, and successfully established and verified an automatic computerized method to examine the antibody titer, which allows identifying blood donors whose blood units donated will be used by the IDF Air Evacuation Unit.

The experience of the US military forces during wars in Iraq and Afghanistan, and researches they conducted later on, proved that providing units of type "O" **Whole Blood** to the injured who are suffering from life-threatening hemorrhage and require blood transfusion in the field, is a safe and easy-to-implement approach for the medical rescue teams. The research showed that although the blood units are kept in refrigeration, the platelets in them still keep their function and participate in the coagulation process of the bleeding. This method comes instead of providing only red blood cells component and a lyophilized ("dried") plasma solution.

The problem with providing Whole Blood is that blood units of type "O" donors, contain plasma with "Anti A" and "Anti B" types of antibodies which can cause reaction in the blood recipient. This can be minimized by finding donors who have a very low level of antibody in their blood, so their units could be transfused to the injured without complications.

The team of the Automated Blood Typing Laboratory in MDA Blood Services, managed to establish and validate an automatic and computerized method for testing the antibody titer, which makes it possible to identify blood donors with blood type O, who donated blood units that are suitable for supply to the IDF Airborne Evacuation Unit. Until now, only units of red blood cells were used and lyophilized ("dried") plasma. The special Whole Blood units will be labeled as "Low Titer O Whole Blood (LTOWB)". Thus, the State of Israel has joined the small group of countries in the world that are already using Whole Blood to save lives.

As part of the annual ceremony commending IDF units that excelled in blood donations during 2017, the first WB unit was handed over by Prof. Eilat Shinar, MDA Director of Blood Services, and Moshe Zadok, Director of the Automated Blood Typing Laboratory at MDA Blood Services, to the IDF Airborne Evacuation Unit. The ceremony was held in the presence of MDA Director General Eli Bin, Surgeon General Brig. Dr. Tarif Bader,

prof. Eilat Shinar, MDA Blood Services Director, Deputy Surgeon General and Head of the Operational Medicine Department Col. Dr. Haggai Frenkel, Head of the Medical Branch Lieutenant Colonel Dr. Yaakov Chen, who led the project in the Medical Corps and other senior members of the Medical Corps. The introduction of "Whole Blood" of this kind to the Airborne Evacuation Unit will allow the Medical Corps to provide optimal solution and to save the lives of many injured during emergency evacuation scenarios.

Surgeon General of the IDF, Brigadier General Dr. Tarif Bader: "The Medical Corps and MDA have cooperated throughout the years in routine and emergency situations. As part of this cooperation, a lot of work is done in the area of medical care in the field. This work has matured in this milestone of providing Whole Blood units to the injured in the field. The Medical Corps is working at all times to advance the issue of medical care for the injured in general and during ground and air evacuation of the injured in particular. The addition of the ability to provide "Whole Blood" to the injured during treatment and evacuation is another milestone in saving human lives.

Head of the Operational Medicine Branch in the IDF, Lt. Col. Dr. Yaakov Chen: "The `Whole Blood` unit was provided, for the first time, to an IDF unit that will make it available near the place of injury on the battlefield. This is a breakthrough in the field of medicine in the IDF, since this WB unit provides all the blood components needed to save the lives of the injured in the field. The State of Israel is the second in the world to start using the "Whole Blood" unit and the IDF has the privilege to be the organization that leads the process and to maintain international cooperation with experts from the United States and Norway, together with the MDA Blood Services."

MDA Director of Blood Services, Prof. Eilat Shinar: "The connection between the blood services of MDA and the IDF is unique. The fact that about a quarter of the blood donations in Israel are donated by soldiers in the IDF should not be taken for granted, especially in view of the many difficult tasks the IDF has to cope with. I am proud that we, at the MDA Blood Services, are attentive to the requirements of the IDF, and are able to make every effort to enable the Medical Corps to stand in the front line and to provide advanced, modern and updated treatment for the injured."

MDA Director-General, Eli Bin: "The Blood Typing Laboratory in MDA Blood Services stands at the forefront of technology and aligns itself with the leading countries in the field of medicine. Identifying the level of antibody titer in the blood that allows the transfusion of a Whole Blood unit to a injured person who is bleeding in the field will increase the chances of saving his or her life. MDA and the IDF Airborne Evacuation Unit join forces and together make it possible to save lives more efficiently and effectively."

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