



Apheresis activity in Spain: A survey of the Spanish Apheresis Group



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ABSTRACT

The Spanish Apheresis Group is a scientific association of physicians and nurses representing most of the medical centers in the country that are involved in apheresis. The group developed a survey in order to get information about the types and number of apheresis procedures performed in Spain. We received responses from 66 centers and we were able to collect data from at least one center of each autonomous region. There were 7 centers (11%) that did not perform any kind of apheresis procedures, 26 (39%) centers performed therapeutic apheresis procedures only, 18 (27%) centers performed apheresis donations only, and 15 (23%) centers performed both types of apheresis procedures. Regarding therapeutic apheresis in adult patients, plasma exchange (34%) and stem cell collections (30%) were the two therapeutic procedures most frequently reported, followed by erythrocytapheresis (13%) and extracorporeal photochemotherapy (11%). Regarding apheresis donation, our survey showed that the most frequent was multicomponent donation (45%) followed by plasmapheresis (28%) and single plateletapheresis (21%). When analyzing the current instrumentation for performing apheresis procedures, centers used the Spectra, Optia, and Trima devices (TerumoBCT) as the most frequent ones, followed by the MCS+ (Haemonetics), Amicus (Fenwal), and Fresenius devices. In conclusion, we report here the first nationwide survey performed in Spain in order to get information about apheresis activities in our country. The survey is representative of Spain because we were able to collect data from at least one center from each of the different 17 autonomous regions, and we found a wide variety of therapeutic and donation procedures, as well as instrumentation used.

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1. Introduction

The Spanish Apheresis Group, (GEA, from its Spanish name “Grupo Español de Aféresis”) was formed in 1998 under the auspices of the Spanish Society of Hematology and

Hemotherapy and the Spanish Society of Blood Transfusion and Cellular Therapy. The GEA is a scientific association of physicians and nurses representing most of the medical centers in the country that are involved in apheresis procedures.

Spain has 17 autonomous regions and at least one center in each community is capable of performing apheresis procedures for its population. In the past, our group focused its attention on patients suffering from thrombotic thrombocytopenic purpura (TTP) who underwent plasma

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exchange and the outcomes of those patients who received quarantined fresh frozen plasma (FFP) were compared with those patients who received FFP inactivated with methylene blue [1–4]. However, little is known about the current situation of the apheresis units and apheresis activity in Spain.

In other countries, national apheresis registries have been comprehensive and have regularly reported their experience such as in France [5], Canada [6] and Sweden [7]. By comparing those data, significant differences have been found in terms of treatment and in the incidences of complications among countries. To understand international perspectives and regional differences, international apheresis registries have been established by the International Society for Apheresis (ISFA) and the World Apheresis Association (WAA), and more recently, to increase the number of participating centers and to reduce costs, these apheresis registries have been established on the internet [8].

In 2012, the GEA conducted a survey in order to get information about organizational aspects, types of devices employed and type and number of apheresis procedures performed in Spain in 2011.

2. Materials and methods

We developed two surveys to obtain a general overview of apheresis activity: one survey was designed for centers performing therapeutic apheresis and another one was designed for centers performing apheresis donation.

After the initial development, the questionnaire was agreed upon by the board of the GEA and then a pilot survey was conducted in order to test the clarity of the questions and the feasibility of answering them. Finally, both surveys were presented at a GEA general meeting for approval. After that, there was dissemination and distribution of the surveys among all members of the GEA and through the web of the two sister organizations, the Spanish Society of Hematology and Hemotherapy and the Spanish Society of Blood Transfusion and Cellular Therapy started.

Regarding the survey for centers working on therapeutic procedures, we asked about the patients treated (adult, children or both), the department of the center where the procedures were performed, and the number of physicians and nurses working in the apheresis unit. We also asked about the type and number of apheresis devices present in the apheresis unit, as well as the type and number of therapeutic procedures performed in 2011. Finally, we also asked about quality management. In the survey for centers working on apheresis donations, we asked about the number of physicians and nurses working in the apheresis unit and about the type and number of devices present in the unit, as well as the type and number of apheresis donations performed during 2011. Finally, we asked about quality assurance systems in place in the unit.

Those centers that performed therapeutic and donation apheresis procedures answered both of the two surveys. We centralized the collection of all the surveys in one center which received them by fax or e-mail, and where the

data were introduced into a data base and analyzed. We reported qualitative variables as absolute numbers and frequencies, and continuous qualitative variables as the median (range).

We also contacted manufacturers distributing plasma exchange kits for centrifugation and filtration techniques concerning the number of disposables sold to have a reference about the numbers of plasma exchange treatments in Spain in 2011.

3. Results

We received answers from 66 Spanish centers. At least one center from each autonomous community was represented. The three autonomous regions with more centers answering the surveys were Madrid, Andalusia, and Catalonia (the three most populated autonomous regions in Spain) with 13 (20%), 8 (12%), and 5 (8%) responses, respectively.

There were 7 (11%) centers that did not perform any kind of apheresis procedures, 26 (39%) performed therapeutic apheresis procedures only, 18 (27%) performed apheresis donations only, and 15 (23%) performed both types of apheresis procedures.

Of the 41 centers performing therapeutic apheresis procedures, there were 27 (65%) centers that treated adult patients only, 1 (2%) center treated children only and 13 (32%) centers treated both adult and children patients. The department performing therapeutic apheresis was hematology in 30 (73%) centers, nephrology in 10 (25%) centers, and dermatology in 1 (2%) center. There was 1 (2%) center where therapeutic apheresis was performed in another center. The median number of people working in the apheresis unit was 1 physician (range 0.1–6) and 2 nurses (0–9). The devices for performing apheresis procedures were the Spectra in 36 (88%) centers, the MCS+ in 13 (32%) centers, the Optia in 10 (24%) centers, the Amicus in 7 (17%) centers, and the Trima in 6 (15%) centers. There were 22 (54%) centers with some kind of accreditation. The accreditation was International Organization for Standardization (ISO), Joint Accreditation Committee of the International Society for Cellular Therapy (Europe) and European Group for Blood and Marrow Transplantation (JACIE), or the Transfusion Accreditation Committee of the Spanish Society of Hematology and Hemotherapy and the Spanish Society of Blood Transfusion and Cellular Therapy (CAT) in 12 (29%), 6 (15%), and 4 (10%) centers, respectively. There were 39 (95%) centers capable of performing urgent therapeutic procedures. The median number of urgent therapeutic procedures performed during the last year was 1 (range 0–42). There were 13 (22%) centers that reported having software to manage apheresis procedures.

The type and the number of therapeutic apheresis procedures performed in adult and children patients during 2011 are reported in Tables 1 and 2, respectively. LDL apheresis was performed in 4 (10%) centers, three of them with a filtration system and one of them with the DALI system. Immunoabsorption techniques were performed in 6 (15%) centers, three of them with the ADA column, two of them with Glycosorb, and one of them with Sefarosa.

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