

The Alliance Mondiale Contre le Cancer (AMCC): Programmes present and future

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The Alliance Mondiale Contre le Cancer (AMCC) has developed three programmes associated with clinical and research objectives. These programmes are in accordance with the objectives and goals of INCTR. They are undertaken with academic institutions, scientific societies and French and African charities linked to the local authorities of the African countries in which the projects take place. The three thematic areas are retinoblastoma early diagnosis and treatment, pain and palliative care and pathology.

The retinoblastoma programme

The objective of this programme is to develop a proof of concept through data, to demonstrate to healthcare authorities that children with early stage retinoblastoma (Rb) can often be cured with minimal relative expense compared to the high-stage disease, and also that these patients can be expected to become productive members of society as their vision can also be preserved in most bilateral cases. The hope is that the programme will succeed in demonstrating the cost-effectiveness of this initial intervention and that government and the Ministry of Health will then be willing to take up the expenses of this disease as a public health improvement effort. One of the components of this project is a real-time study of the cost of therapy for retinoblastoma patients.

In 2018, in addition to following up previously treated patients, the programme to improve early diagnosis, treatment and rehabilitation of children suffering from retinoblastoma in sub-Saharan African countries has continued to expand. This programme is active in Bamako (Mali), Lubumbashi (DRC), Abidjan (Ivory Coast), Dakar (Senegal) and Antananarivo (Madagascar). This programme is run in collaboration with GFAOP (Groupe Franco Africain d'Oncologie Pédiatrique), the Curie Institute, Prothelem, Retinostop and supported by a grant from Foundation Sanofi-Espoir, as well as funding from the French Health Ministry.

Current outcomes of AMCC's retinoblastoma programme are reported in presentations and publications from the Bamako team (1-4).

Besides the treatment, educational programmes are also

undertaken in several places, for example, in Bamako with the training of a second ophthalmologist, Dr Aichata Tal, who was trained at the Curie Institute in January 2017 and who returned in December 2018. She is now working with Dr Fatoumata Sylla at IOTA in a permanent position. A nurse anaesthesiologist from IOTA spent two weeks in Paris in 2018 to be trained for the specificities of anaesthesiology in young children with retinoblastoma.

At a fundamental research level, Dr M Keita, assistant in the pathology department (Professor Cheick Traore) in Bamako, Mali, is involved in a research project on the genomic abnormalities in Rb with the Curie Institute and funding from the French association, Retinostop. During 2018, 24 samples of Rb of good quality, were analysed by him with the team from the Curie Institute.

In 2017, with a special grant from the Sanofi-Espoir Foundation to accelerate and finalize the implementation of conservative treatments in Senegal, additional equipment and training for Dr Paule Ndoeye, Head of the Ophthalmology Department at Le Dantec Hospital in Dakar, provided techniques and indications on conservative treatments. It was also an opportunity to launch a media campaign on early diagnosis and to set up registration for all cases of retinoblastoma seen by the Dakar team.

For this programme, meetings were organized, the last of which was held at the Curie Institute in Paris on 22 November 2017 with Dr Rokia Berete, Abidjan and Marcel Ngoy, Lubumbashi to discuss the extension of early detection conservative treatments for Rb to other centres, as well as financial support for retinoblastoma treatment (a request to health ministries).

This will continue with a meeting planned in Paris for 2019, for the three teams (from Bamako, Abidjan and Dakar) who are now able to practice conservative treatments for the early stages of retinoblastoma, particularly in bilateral cases. The objective is that these three teams become reference centres for training other sub-Saharan African countries.

This will be the first step in our next programme (2019-2028) aimed at extending the retinoblastoma programme to all francophone sub-Saharan countries and also to some anglophone countries.

This programme will also allow presentations to be made at international congresses and in publications (1-4).

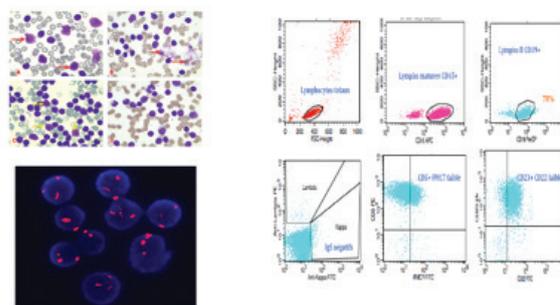
Figure 1: Retinoblastoma: a caritative concert organized by the Foundation Sanofi Espoir, My Child matters programme, with Dr Anne Gagnepain-Lacheteau, Medical Director of the Foundation



Figure 2: Palliative care: Preparation of oral morphine syrup



Figure 3: Cytological, immunophenotypical and cytogenetic analysis of a CLL from Senegal, using the platform i-Path, the pictures are sent for validation by experts. Small lymphocytes, expression of CD5, CD23, and low expression of slg, trisomy 12 detected by FISH



The pain and palliative care programme

This programme has two main objectives: (1) Advocacy for the fight against pain and discomfort in cancer and for the integration of palliative care into oncology programmes in sub-Saharan francophone countries and (2) Training competent teams with the objective of setting up reference centres to take care of patients and to train nurses and local healthcare professionals.

This programme is supported by the "Pierre Fabre" Foundation for five years and AMCC organizes an in-country workshop every two years. In 2017, the third oncology pain management workshop was held in Cotonou, Benin. The workshop was organized in partnership with the Association Francophone pour les Soins Oncologiques de Support (AFSOS), the French-Benin Association for the Fight Against Cancer (AFBLCC), the Beninese Association of Palliative Care (ABSP) and the Beninese Cancer Association (ALCC, Benin) with the support of the World Health Organization (WHO), Médecins Sans Frontières (MSF) and the Ministry of Health of Benin.

The scientific programme aimed at better integrating palliative care into oncology care at an early stage and focused on patients' pain assessment, use of analgesics, use of morphine, breaking bad news, management of wounds and paediatric palliative care.

A major event was the announcement of the delivery of a machine for the manufacture and dilution of morphine syrup and the imminent arrival of morphine powder in Benin in order to prescribe and distribute an effective oral analgesic.

Seven countries were represented in Cotonou and the

workshop was an opportunity to exchange best practices from countries including Benin, Ivory Coast, Togo, Senegal, Congo Brazzaville, Uganda and France.

The next workshop is planned for 2019 and should be organized in partnership with Bobo Dioulasso Medical University in Burkina Faso.

To complement the training, AMCC has launched a Palliafrique Forum (5) in April 2017 at the workshop in Cotonou. This Forum offers an exchange platform to all actors and associations active in the field of pain and palliative care in French-speaking Africa. It aims to support the creation of reference centres and to support training for pain care and palliative care in oncology. It can be accessed at www.forum-palliafrique.org.

This Forum, coordinated by Sabine Perrier-Bonnet, is mainly involved in palliative care training in Africa and is open to all healthcare professionals and students who want to improve their knowledge and/or exchange on palliative care and pain management issues. The Forum was presented at the Fourth International Francophone Congress of Palliative Care in Geneva in November 2017 and shows active exchanges between these different centers (6).

Pathology programme

In 2017 and 2018, the main activity of the pathology programme was the diagnostic support in hematopathology via telepathology with three actions:

- The extension of the network of the i-Path platform with the purchase of new microscopes for several centres: Abidjan (Ivory Coast), Bamako (Mali), Kinshasa (DRC),

Ouagadougou (Burkina Faso), Lubumbashi (RDC), Antananarivo (Madagascar) and Yaoundé (Cameroun). This was funded by grants from the Foundation Obelisque, Paris, and by the Foundation Sanofi Espoir in order to equip these new centres. The network of telepathology in French-speaking African countries now includes 10 centres (7). A first meeting on telepathology was organized in Paris on the 27 September 2018 at the Foundation Sanofi Espoir. Past and present experiences were presented as well as new equipment for the future with the possibility of digital pathology and whole slide scanning if standard techniques improve.

- ➔ Participation in the Treatment Protocol for Aggressive B-cell Lymphoma in Adults in Dakar, coordinated by Professor Saliou Diop (Hematology, Dakar) and Professor Pierre Feugier (Hematology, University Hospital Nancy) which began in September 2018. This protocol is supported by INCa (French National Cancer institute) and the role of AMCC is to coordinate and review the slides for patients enrolled in the protocol through the i-Path platform.
- ➔ Support in organizing the Pathology Committee of the GFAOP, which was launched in November 2017 during the GFAOP meeting. Dr Elisabeth Auberger, member of AMCC and Head of the Pathology Department of the General Hospital Simone Veil, Eaubonne, is the coordinator of the Committee. This Committee includes pathologists from francophone sub-Saharan countries and from Maghreb. The pathologists from the South are connected to the Path platform and they are invited to meetings for the review of slides of patients enrolled in therapeutic protocols for nephroblastoma, retinoblastoma and Burkitt lymphomas. These meetings are organized by Professor Aurore

Coulomb-L'Hermine (Head of the Pathology Department at University Hospital Trousseau, Paris).

Besides the diagnosis support, the pathology programme is also involved in more fundamental research. Research was developed during the PhD thesis at the University Cheick Anta Diop, Dakar, with Dr Abibatou Sall on lymphoproliferative disorders in Senegal in 2016. After a clinicopathological study of CLL cases from Senegal (8,9), (Figure 3), the analysis of immunoglobulin genes was undertaken by Professor Lorenzo Leoncini's team at the Department of Pathology, University of Siena. Material from Chronic Lymphocytic Leukemia (CLL) patients included in this study was analysed by NGS (New Generation Sequencing) and showed preferential usage of specific immunoglobulin heavy chain variable region with unmutated profile and advanced stage at presentation in Senegalese patients in comparison with Italian CLL patients suggesting diverse genetic and microenvironmental backgrounds (10).

In conclusion

The programmes developed by the AMCC are in line with the programmes of INCTR. In some Francophone African countries, they are mainly involved in paediatric oncology and conducted in collaboration with the GFAOP.

These programmes are supported by public and private institutions or foundations. The ultimate objective is to improve the care of cancer patients (adults and children).

These actions on retinoblastoma, pain and palliative care and pathology are ongoing with the objectives of education and training, early detection and treatments for malignancies, support diagnosis and research. ■

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