

## Cancer in Africa: AORTIC 8th International Cancer Conference 'Entering the 21st Century for Cancer Control in Africa' 30.11.–2.12.2011

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Cancer in Africa seems a rather unusual topic. Considering the major topic 'non-communicable diseases' at the general assembly of the United Nations (UN) in September this year it is rather newsworthy. The 4 main non-communicable diseases – cardiovascular disease, chronic lung diseases, diabetes and cancer – kill 3 in 5 people worldwide causing great socio-economic harm, particularly in developing nations. The conclusion of the UN is 'stop smoking, reduce drinking, eat healthy, do sports, and prevent cancers'. Thus, it is definitely a challenge for the international scientific community to discuss the topic of cancer in developing countries.

The African Organisation for Research and Treatment in Cancer (AORTIC) was formed in 1983. AORTIC's Objectives are to 'support, integrate and facilitate evidence-based interventions and innovative programs towards the prevention and control of cancer in Africa. The mission is to facilitate the development of national cancer control programs; to facilitate and promote research in cancer relevant to Africa and to create awareness of the prevalence of cancer in Africa' ([www.aortic-africa.org](http://www.aortic-africa.org)). The current chair of AORTIC is Professor Isaac Adewole from Nigeria.

The AORTIC conference in Kairo December 2011 on cancer in Africa attracted >300 delegates – the vast majority from 32 of the 54 countries in Africa. In 2009 a research collaboration in Halle (Saale)/Germany and Addis Ababa/Ethiopia and Wad Medani/Sudan was established to investigate breast and gynaecological cancer in the respective countries. Funding was obtained from the German Ministry of



**Fig. 1.** Ethiopian – Sudanese – German Collaboration Group at the Poster Presentation of the AORTIC Conference: W. Tariku (Ethiopia), A. Omer (Sudan), S. Bogale (Ethiopia), E. Kantelhardt, G. Braun, E. Breitenstein, A. Führer (Halle/Saale Germany).

Education and Research (BMBF) in 2011. At the AORTIC meeting, the group presented preliminary results on epidemiology, basic pathological features and clinical outcome of female cancers in Ethiopia and Sudan (fig. 1). The conference provided an excellent platform for presentations, discussion and networking.

## Cancer Registration in Africa

Data from cancer registries in developing countries are scarce [1]. From cancer registries one can get incidence rates and trends in incidence, regional distributions including risk factors, cancer outcomes, follow-up and projection of future cancer burden. Also cancer prevention, early detection programs and the efficiency on health services can be monitored and evaluated by a cancer registry. This is extremely important in countries with limited health budgets that have to prioritize expenditures.

David Foreman from the International Agency for Research in Cancer/Lyon France reported about the Global Initiative for Cancer Registry Development (GICR). Especially countries with limited resources will be supported to improve the quality of cancer registration (<http://gicr.iarc.fr>). The world incidence of cancer is estimated to be 11.6/100,000, Africa stands at 1.1 /100,000. So far there are only 5 high-standard established cancer registries within the whole African continent [2]. Charles Dzumalala from Malawi reported about EARN (East African Registry Network). In East Africa, running population-based registries are found in Kenya, Malawi, Uganda and Zimbabwe. Some of them have data back from the 1950ies! Ruanda, Ethiopia and Tanzania are starting to register now. The most common male cancers in East Africa are: Kaposi's sarkoma (16%), oesophageal carcinoma (10%) and prostate cancer (9%). The most common female cancers are: cervical cancer (26%), breast cancer (15%) and Kaposi's sarcoma (8%) [3]. A rise of incidence in breast cancer in the urbanized population is observed.

## Breast Cancer in Africa Is Often Advanced

In 2007 newly diagnosed breast cancer cases (1.3 million) were shared in half between countries with low and countries with high resources. The estimated number of breast cancer deaths was clearly shifted to the later (60%). Joe Harford, Director of NCI's Office of International Affairs (OIA), stated in the keynote lecture on '... the most significant features of cancer in low-income countries are 1. late diagnosis, 2. late diagnosis, 3. late diagnosis. Implications of late diagnosis are lower cure rates and more suffering and deaths due to cancer. There is need for education of health care workers and the public on warning signs and the benefit of early detection. ... Interventions aimed at achieving earlier presentation of symptomatic disease may be more appropriate than screening of asymptomatic women' [4].

Marilyn Corbex from Belgium also opposed screening in Africa because the majority of patients are young, human and technical resources are scarce and the incidence is not high enough to justify screening [5]. She performed a study on down-staging of cancer by training health personnel in early detection and public awareness. Her data from Malaysia [6] is

supported by a huge trial from India involving 100,000 female residents invited for triennial clinical breast examination versus a control group [7]. The outcome of the study in Malaysia and India showed dramatic reduction of late-stage presentation (stage III and IV) in the intervention groups. Results on survival will be obtained at a later stage of the trial.

## Breast Cancer in Africa is Different

Women with breast cancer present late in Africa – is there anything more we can say? Yes, definitely, there are very interesting insights into the biology of the disease. Several groups have described the overrepresentation of triple-negative breast cancer among women in Africa (as well as Afro-Americans in the USA) – 30% versus around 10% after adjustment for age [8]. There are also considerable numbers of BRCA1 and BRCA2 mutations (7/4%) found in Nigerian patients [9]. Also male breast cancer seems to occur more often in the African populations. When comparing the male to female ratio over time, a proportion of 2–9% was observed [10]. This is also a topic that needs further investigation.

Amr Soliman and his group found striking differences in proportion of inflammatory breast cancer (IBC). In Egypt/Tunisia 10–15% of all breast cancer cases are described as inflammatory. The tumour characteristics from IBC did not differ compared to non-IBC cases in Egypt [11]. Comparing to US-data, the proportions are higher (USA: 1% IBC), the onset is in younger age and survival probabilities much worse. More epidemiological, clinical and biological information is needed to explain this pattern.

## Preventable Cancer – What To Do About Smoking?

With regard to cancer prevention the discussion was focused mainly on tobacco-related cancers. Introducing the topic, Feras Hawari from Jordan spoke on the epidemiology of tobacco consumption in the Eastern Mediterranean region, particularly emphasizing on the widespread use of water pipes. Her statistics suggested that by becoming more and more fashionable also among young women and girls in the urban setting tobacco consumption via water pipe is increasing. She called for stricter laws to prevent smoking [12]. The next speakers reported about a study that showed the urgent need to focus on smoking cessation as well. When reducing the number of smoking adolescents by half until 2020 the estimated tobacco-related mortality would be reduced from a total of 520 million to 500 million in 2050. When reducing the number of smoking adults by half the estimated tobacco-related mortality would be reduced to 340 million in 2050. Therefore cessation programs with the most effective combination of counselling and medical treatment should urgently be implemented.

## Palliative Care

Anne Merriman from Kenya reported about the problem of palliative cancer care in developing countries. Particularly morphine derivatives are available with great difficulties only. Almost half the African countries still have no palliative care service identified. In Anglophone Africa palliative care has been established since 1979 – more developing since a decade from now. Francophone Africa has almost no palliative care at all. Affordable and available morphine, support of health care professionals and palliative care training in the medical setting is urgently needed. First plans for Cameroon are to start in 2012 [13].

## Future Transnational Perspectives

Cancer in Africa will become of more and more interest – not only for pharmaceutical companies approaching these ‘emerging markets’. With urbanisation, changes in life-style and health care seeking patients requiring services, details on cancer care in the African setting have to be discussed within the scientific community. Research is done and particularly needed on the specific biological characteristics of breast cancer in Africa. Appropriate early detection and treatment strategies have to be further developed. Our Ethiopian – Sudanese – German collaboration experiences that transnational research is possible and gives new insights into this disease [14–16].

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