Cancer in Sudan: palliative care is the most rapid way to less suffering

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Abstract
Information on cancer in Sudan is limited. However, with great probability every year 50-60 000 patients die from cancer (mean age around 50 years). Early detection and centralized treatment is the best strategy to avoid advanced cancer. However, in Sudan this will take time. Therefore it is urgent need for a realistic country-wide palliative care programme. In contrast to centralisation of cure for curable patients, de-centralisation of care is the way forward for incurable patients. In this way the single advantage of the country can be used. Sudan has high family culture in contrast to western countries where culture of the family is decreasing. Using the hospital-at-home approach it should be possible to reduce suffering of patients significant and cost-effective. Greatest attention on the way to efficient palliative care of cancer in Sudan demands:
1. Government and political powers should have the political will to change the situation.
2. The medical community should organize a de-centralized network for palliative care satellites, directed by a number of qualified palliative care units (PCU). Topics are morphine distribution and education particularly for palliative care nurses.
3. Mosques and churches should use cancer as a bridge for working together for more dignity of life for all Sudanese people.

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**Keywords:** Cancer, palliative care, centralized cancer cure, de-centralized cancer care, palliative care units, morphine, palliative care nurse.

**Introduction**

Table 1 shows the global cancer statistics at the beginning of the 21st century. In the industrialized world the situation remains more or less unchanged. However, the increasing age of cancer patients means, that cancer becomes more and more a “normal” end of life. A problem is high cost related with a tendency of “big business” in cancer therapy\(^{(1,2)}\). In the developing world we have to expect an explosion of cancer incidence and mortality in the next decades. Poverty and lack of education creates growing human suffering also with respect to cancer. But the world is rich enough to guarantee dignity of life for everybody. We need a world of globalisation for peace and health. Oncologists can make significant contributions and will be motivated by the enormous and unnecessary suffering of millions of cancer patients\(^{(3)}\).

<table>
<thead>
<tr>
<th>Year</th>
<th>Incidence (Million/year)</th>
<th>Mortality (Million/year)</th>
<th>Author</th>
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<td>developing countries</td>
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<td>-</td>
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<tr>
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<td>6.4</td>
<td>4.3</td>
<td>2.1</td>
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<td>1985</td>
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<td>8.4</td>
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<tr>
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**Cancer in Sudan**

Information about cancer in Sudan is limited. However, available data show a low level of health care and EMRO (WHO Eastern Mediterranean Regional Office) statistics\(^{(4)}\) makes evident that Sudan is still more distant from the OECD level (Organisation for Economic Co-Operation and Development) than neighbouring countries. Certainly, this reflects historical and geographical aspects. But with great probability also the military conflicts of the last two decades play a great role (Tab 2).

| Health care indicators in selected EMR countries in comparison to OECD countries |
|-----------------------------------------------|----|---|---|---|
| Egypt | Iran | Sudan | OECD |
| Population (million) | 57.1 | 58.8 | 45.1 | 1 179 432 |
| Life expectancy (years) | 70.5 | 71.9 | 58.9 | 79.1 |
| Expenses for health (PPP $ /year) | 310 | 689 | 71 | 3100 |
| Physicians (per 10 000) | 24 | 9 | 3 | 35 - 40 |
| Hospital beds (per 10 000) | 21 | 14 | 7 | 40 - 80 |
| Morphine consumption (mg/capita) | 0.1 | 0.4 | - | 50 |
| Total fertility | 3.9 | 4.0 | 6.8 | 1.0 – 2.0 |

Taking into account poverty and the adult literacy rate of only 69.3\(^{(5)}\) difficulties in cancer prevention are well-understandable. Efforts are being made to educate the population regarding signs and symptoms of cancer, but still it remains a topic that only a minority of the population has heard about. This contributes to the late presentation of many people who do eventually seek treatment. At the Radiation and Isotopes Centre Khartoum (RICK) approximately 80% of patients are presenting with advanced
cancer, only suitable for palliative therapies. For head and neck cancer, one of the most frequent types of malignancies, it was found that >90% of patient presented at the hospital for treatment were stage IV patients. The reason was simple: 48.7% of the study subjects were living in places more than 5 hours distant from the hospital by public transportation and only 23.8% were living in and around the capital where the hospital was located. In breast cancer the situation is similar. 60.7% of 1255 women referred to Institute of Nuclear Medicine, Molecular Biology and Oncology (INMO) at Gezira University presented incurable stages III-IV. In patients living in rural areas the percentage was still higher. A possible solution is for states to organize early detection using simple methods. The study of Ibrahim on feasibility of visual inspection with the use of acetic acid (VIA) as a screening method for cervical cancer, an alternative to the Pap smear used in primary health care setting in Sudan, shows what can be done to find the most effective approach with the best cost-benefit-relation. However, early detection is not all. It only makes sense if a network of qualified treatment is available to treat the tumours detected. Qualified treatment means multidisciplinary approach according to international accepted guidelines. This is expensive and needs specialized staff and equipment. In a country like Sudan such cancer management can not be offered to everybody close to his home. But the chance for successful treatment justifies distant treatment facilities. Centralisation of cure is the way out. Sudan needs a geographically well-distributed network of about 10 comprehensive cancer centres established according to a governmental plan. Each multidisciplinary centre should have 200-300 beds.

Early detection and adequate treatment is the best strategy is to avoid advanced cancer. Therefore, as in other developing countries, the management of advanced cancer is actually the greatest challenge.

**Palliative cancer care in Sudan**

**Strategic considerations**

Roughly, every year 60,800 Sudanese cancer patients need palliative care. Without it they are likely to be experiencing unrelieved physical, psychological, spiritual and social suffering. Many of whom will die needlessly with unrelieved pain. To overcome existing problems, first steps for developing PCU at the well-established oncological institutions were made during the last years. This strategy was supported by a number of international experts and NGO’s. For example, it was a great benefit when in 2009 the British palliative care nurse Esther Walker was posted to Khartoum due to her husband’s work at the British Embassy. 2010 has been an exciting year for the development of palliative care in Sudan with the launch of a nine-bedded palliative care ward and a clinic open daily at RICK and other advocacy, training and development activities. There is no doubt, that patients being cared at RICK have great advantages from a dedicated palliative care team and access to opioids will be promoted. The palliative care team consists of nurses, a registrar, medical officers, psychologists and volunteers. This service has been developed without any specific funding, but with essential support and encouragement from Hospice Africa Uganda (HAU), International Association for Hospice and Palliative Care (IAHPC)) and Sudan Health Consultancy Group (SHCG) as well as the enthusiasm of volunteer health care professionals.

A number of national and international events on palliative care supported these initial steps. In 2010 a three-day workshop – ‘Palliative Care in Practice’ was held at Soba University Hospital (SUH). A highlight in palliative care was certainly the regional palliative care workshop conducted by WHO-EMRO in co-
operation with the Europe-Arab School of Oncology (EASO), Milan, from 17th to 20th of October 2010\(^4\). The participants were pioneers in palliative care from 17 countries including Sudan. It was assessed that main barriers for palliative care in Sudan are lack of trained human resources and infrastructure. Moreover, a strong need for improvement in availability of opioids and pain killers was underlined. By the end of the workshop, participants had agreed on recommendations that have been adopted by WHO-EMRO as guidelines for Ministers of Health. The recommendations were:

- To include palliative care in health care strategy.
- To introduce palliative care in undergraduate and postgraduate training.
- To make opioids easily accessible to all patients.

Participants also agreed to start an Association of Palliative Care for EMR countries. EMRO and EASO are full available to support this initiative.

All this means that in Sudan there are ideas and a group of well-motivated specialists for palliative care, supported by international adviser. For example the University of Bologna (Italy) offers a specific academic graduation for palliative care\(^11\). Now there is need for a strategy, how to go forward with a realistic step-by-step programme in Sudan. In contrast to centralisation of cure for curable patients, de-centralisation of care for incurable patients is the way forward. The reason is simple. Centralisation of care in palliative care units or hospices meets most of the needs and feelings of the majority of patients\(^12\). However, an in-bed strategy is not realistic because 20-30% of the available in-bed resources would be occupied by dying cancer patients and increasing the in-bed capacity for them is not cost-effective. Of course this does not mean to ignore the urgent need for a number of well-equipped hospices and PCU, geographically well-located in the country and associated with the comprehensive cancer centres. These are necessary for the direction of de-centralized care including drug supply etc and should be available for those patients who cannot receive palliative care at home.

De-centralized care means to bring palliative care to the patients and not patients to palliative care. The optimal approach for that is the hospital-at home\(^13\). More than 30 years experience with this approach shows that more than 80 % of incurable patients can have pain relief and will die in dignity at home. This is called Eubiosia\(^14\). ANT Italia and CANSUPPORT New Delhi show how it works\(^15,16\). The basic precondition for hospital-at-home is family solidarity. In this respect, Sudan and other developing countries have great advantages in comparison to the Western World. Sudan has a fertility of 6.8, Germany of 1.3. Moreover, Sudan has high family culture in contrast to western countries where culture of the family is decreasing. This advantage has to be used. However, the family alone is not enough for hospital-at-home care. A key player is the palliative care nurse for visiting patients at home. The nurse offers training of family members in care-giving and controls at least once a week the situation. Moreover, the nurse managed drug supply including morphine in absence of the physician following his advice. Hospital-at-home nurses have great importance in developing countries. To recruit enough doctors for palliative care is sometimes not easy. But at least a part of doctor’s function can be provided by an experienced nurse and recruitment of oncological nurses for hospital-at-home care is easier and costs less. In Uganda, a network of trained palliative care nurses, licenced to prescribe liquid oral morphine has demonstrated how palliative care can be provided safely and effectively in the community without access to a large number of doctors\(^17\). Inclusion of palliative care in all undergraduate nursing and medical schools is necessary. Even a separate specific
two-year training programme for well selected candidates can be discussed. Following this strategy it should be possible to reduce suffering from cancer in Sudan significant in the foreseeable future. There are four aspects which needs great attention on the way to efficient palliative cancer care in Sudan:

1. The medical community should understand the problem and should follow the way with greatest enthusiasm having in mind the suffering of patients.
2. Government and political powers should have the political will to change the situation.
3. Mosques and churches should use cancer as a bridge for working together for more dignity of life for all Sudanese people.
4. International partnership and advice should be fair and free from commercial and political interests of foreign countries.

Ideas for the National Road Map

1. Establishment of a National Working Force (including representatives of cancer institutes, political powers, ministry of health, church, EASO, NGO’s etc). The main task of this working force is strategic work and looking for adequate finances/grants. Working should be close related with EMRO Cairo.
2. Mosques, Churches and religious groups should establish an Inter-Religious Body for the fight against cancer and AIDS.
3. Organisation/management of a Country-wide Network of Palliative Care Satellites (each responsible for about 500-1000 terminal patients yearly) which are authorized for opioid prescription/distribution. This network is nominated by the ministry of health and receives training and quality control of RICK and other authorized institutions. The satellites can be part of cancer hospitals or of primary health care centres. However even independent satellites are possible. Most important is the fact that satellites are located close to the majority of patients. In any case at least one team having a single doctor and a group of mobile nurses trained in palliative care, has to be in charge of the palliative care satellite.
4. Definitive decision of government and political powers to modernize legislation for morphine supply/use. Uganda could be a model for legislation and training.
5. Training of the staff of nominated satellites in hospital-at-home-care. For organisation of training is the Europe-Arab School of Oncology (EASO) available. Places for training of hospital-at home care can be:

   - CANSUPPORT New Delhi (http://www.cansupport.org/newcansupport ),
   - Academy of Science of Palliative Medicine and "G. Prodi" Center for Cancer Research, Alma Mater Studiorum, University of Bologna, Bologna,Italy. (guido.biasco@aosp.bo.it)
   - HAU, Hospice Africa Uganda, Kampala (http://www.hospiceafrica.or.ug).
7. Participation at the development of the VIP (visitphone) which is a combination between I-phone and a patient station for Skype communication doctor-patient for “flying visites”(15). This is the most simple way to construct permanent hospital-at-home contact with patients. (www.pironex.de).
References

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