Promoting Paediatric Oncology In Developing Countries

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Abstract
An appalling loss of children lives is a grave reality on this planet. More than 10 million children will die before they reach the age of 5. More than 60 % of these could have been saved by very simple and cheap interventions, but the vast majority are the victims of poverty. They live in areas where no health services – being promotive, preventive or curative – exist. The attention of the world community is certainly changing – with the Millennium Development Goals (MDG,s) and the Lancet series on child, newborn and maternal survivals are prime examples.

Our emphasis on children with cancer must have this as a background. But the global health in general, and child health in particular is improving in many parts of the world. And as the diseases of poverty declines, childhood cancer emerges as one of the important killers in childhood. The rich countries all demonstrate this in their own history, and in our time countries in transitional economy (like Latin-America) confirm that childhood cancer is emerging as a major problem. Besides our moral obligation to do something for children with cancer in developing countries today we must anticipate that there will be an increasing commitment from health planners and decision makers in more countries – as the diseases of poverty hopefully declines.

Introduction
I am often asked the question: How is it possible to combine a compassion for children in developing countries, and at the same time serve as chairman of one of the biggest and best-equipped pediatric departments in one of the richest and most privileged countries in the world ? Perhaps that is the very reason how we may balance the two. We should remind ourselves that the very fact that we are so privileged should also serve as a stimulus and inspiration to do something for the less privileged. The rich world has also captured some of this challenge now – and there are some reasons for optimism. I will cite just a few:
In 1990, world leaders gathered in the “World Summit for Children” in New York issued a declaration that something had to be done with the incredible morbidity and mortality of children in poor countries. Even some milestones were formulated. However – at the entry into a new millennium no improvements in health metrics were observed – and in some countries there was even a worsening of infant and under-five mortality rates.
As a result, all heads of states agreed in the year 2000 that something more had to be done in order to reduce poverty and suffering. Eight “ Millennium Development Goals” (MDG’s) were formulated (www.un.org/millenniumgoals/) and of relevance to us is :
- MDG 4: To reduce by two thirds the mortality rate among children under 5 years of age (from 1990 to 2015)
- MDG 5: Reduce by three quarter the maternal mortality rate in the same timeframe

Remember that these are commitments made by State leaders of 189 countries. We have heard promises before – but never before have promises had such impact. The world has seen almost an explosion in aid money and partnerships. The Global Fund for Fighting AIDS, Tuberculosis and Malaria (www.theglobalfund.org/en/) have committed USD 7.6 billion over the next two years to support programs in 136 countries. The Global Alliance for Vaccines and Immunization (GAVI, www.gavi.org/) have more than USD 3 billion in commitments over the next ten year, and Partnerships of many types have been established (e.g. Partnership for Maternal, Newborn and Child Health
which commits members of the UN family and various stakeholders from civil society to integrate their effort more efficiently.

Perhaps of equal importance, however, is the increased attention the tragedies of the developing countries have had in medical and scientific literature. Lancet has led this crusade with their series on maternal, newborn and child survival – but many others have followed.

Why this long introduction? There is no comfort to the child with cancer in a developing country that a vast number of his age group is dying of diseases of poverty. Those of us who have devoted our professional life to children with malignant disease – have a responsibility to make these children heard and cared for. However, we should not expect public money in the 70 + poorest countries to be available for our group of children at this point in time. As a Society and individuals, however, we have an obvious responsibility to the patients out there and to our friends and institutions fighting for them.

**The Huge Challenge: Bridging the Gap**

More than 80 % of children with cancer live in a developing country [1, 2]. Most of them probably have no access to health care – and if they do, they most often present with advanced disease – making the chance of cure even slimmer. Children in the rich countries have a probability of survival of more than 75 % all cancers combined. However – in our countries this is one of the most expensive fields in paediatrics. A newly diagnosed child with any malignancy in my country will be met by a small army of paediatric oncologist, clinical nurses, often a surgeon, pharmacists, anaesthetist, dieticians, social workers, and sometimes a radiotherapist [3]. A careful study from Finland in 2000 has calculated that treating one child with standard risk leukaemia cost more than 100,000 dollars [4]. Supportive care is also expensive. Modern techniques in blood transfusion with the use of different components of the blood and extensive testing for various infectious agents have made it much more costly still. In UK, the annual cost of blood products was 252 millions pounds in 1994, but 898 mill pounds in 2001 (Varney and Guest, 2003).

With 1.5 billion people living on less than a dollar a day – and with non-functioning public health systems in many countries – it is clearly not possible to expect any support from public sources in the least developed countries. Money must come from the civil society including parents group, various private NGO’s - and – of course we as professionals in the field in the privileged part of the planet has a part to play.

**SIOP**

Our own society has had its own focus on the issue. Under the name of Paediatric Oncology in Developing Countries (PODC) a definite focus has been on the topic for many years. Under the tireless leadership of Hans Peter Wagner SIOP has focused on the following activities:

- Part of our annual meeting is dedicated to PODC and increasingly integrated in the general program
- Fellowships to enable attendance at our meetings have been given to young colleagues from a developing country who have shown a great interest in our topic
- Regional meetings are supported both with money and with guest speakers
- Twinning is registered and encouraged
- Two programs have been initiated and promoted by SIOP: One is the training program in India – and the other is professor Hesselings studies on Burkitt lymphoma in Malawi.

1. The National Training Project in Practical Paediatric Oncology started with a workshop in Mumbai in November 1997. Up to this day workshops have been arranged all through India and more than 600 paediatricians have been trained. A manual in “Practical Paediatric Oncology” was quickly produced and released with a set of teaching slides – All made for and by Indian colleagues. A second edition of the manual was released in 2003[5].

2. The Burkitt lymphoma project also started in 1997 in Malawi. A modified LMB 89 protocol was found to be effective and manageable in the hospital setting (57 % EFS in Stages I-III). Three consecutive protocols have been tested since and all with decreasing level of intensity. The results are still very encouraging – and the protocols have now been
introduced to several other Sub-Saharan countries (8).

**Twinning**

With twinning is meant the close cooperation between a hospital in a rich country with a corresponding institution is a less developed country. Many such twinnings have been established in the recent 10 years. One of the first and best known twinning programs are that between a hospital in Managua, Nicaragua and hospitals in Monza and Milan in Italy and Bellinzona Switzerland (7). This program (now called MISHO = Monza International School of Paediatric Haematology /Oncology) has certainly shown sustainability and growth. A meeting was organized in August 2006 with specialist from 15 countries of the Caribbean, Central and South America, Canada, Italy and the USA to discuss past experiences, expansion and future activities (8).

**Many other could be mentioned – and here are a few:**

St Jude’s out-reach program (9), twinning between Berlin and Moscow and Munster and Kiev (10). A remarkable twinning project of long standing is between Amsterdam and Yogyakarta in Indonesia (12).

Also other stakeholders in the civil society have focused increased attention on the child with cancer in developing countries. The UICC “My Child Matters” initiative has so far given support to 14 projects with the aim to “improve early diagnosis, treatment, care and support of children with cancer in the developing world” (12).

**Difficulties to overcome**

Even with well funded programs, there are specific challenges facing those who will start a program for children with cancer in developing countries. Malnutrition is wide-spread and is a serious risk factor for the child (2, 18). In many countries more than a third of their children are severely malnourished. Socioeconomic status is an obvious indicator with great influence on outcome (14). Abandonment of treatment is the main cause of failure in many programs as well as death from treatment-related complications especially in the first learning years.

It is of great importance that the children should be referred to paediatric cancer centres (PCU’s).

Ponte di Legno Statement emphasizes: “Centres or groups of excellence should be developed in low-income countries to ensure the efficacy and safety of chemotherapy, by adopting policies of high quality care, including the use of well designed protocols and adequate supportive care”(15, 16).

Availability of drugs for children is a global problem in developing countries, and certainly not limited to cytostatics. A list of “essential drugs for childhood cancer has recently been published” (17). It is encouraging that the World Health Assembly in May 2007 made a resolution that instructed WHO to make a new and updated list of essential medicines for children. We have every reason to believe that this will also include drugs for the child with cancer and a meeting between the SIOP Board and the relevant WHO office was held in January 2007 on this topic.

Cancer registration is at best minimal and almost always hospital based. We know that gender equity is a rarity –as male dominates in most series in all diagnostic categories. A recent report from one institution is again from Malawi: Of a total of 707 cases registered in the years 1998-2003, 348 (49%) were verified histologically. The majority got the diagnosis of Burkitt lymphoma. HIV-associated Kaposi sarcoma was suspected in 61 children, but verified histologically in only 15 (18).

Advocacy for children with cancer is a necessary part of our daily work. Fighting for resources and visibility is a necessary part of our agenda. Whenever we can, we should include the global perspective in our advocacy.

**References**