Symptom Control And Palliative Care Used In Patients Affected By Kaposi Sarcoma In Vryheid Hospital

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Abstract

Thirty nine patients were diagnosed histological as sarcomas in Vryheid District Hospital since October 2004 until March 2008, in Kwazulu Natal Province Republic of South Africa. From these 39 patients 27 had been suffered from Kaposi's sarcoma disease. The clinical features found in these patients as well as the pain, symptom control and palliative care done in those at district rural hospital level are exposed. The prognosis of patients was better proportionally with the proper adherence of the relevant protocols, as well as the level of family and community support to them.

INTRODUCTION

Kaposi's sarcoma (KS) is a tumor caused by Human herpes virus 8 (HHV8), also known as Kaposi's sarcoma-associated herpes virus (KSHV). It was originally described by Moritz Kaposi, a Hungarian dermatologist practicing at the University of Vienna in 1872.[1] It became more widely known as one of the AIDS defining illnesses in the 1980s.

KS lesions are nodules or blotches that may be red, purple, brown, or black, and are usually papular (i.e. palpable or raised).

They are typically found on the skin, but spread elsewhere is common, especially the mouth, gastrointestinal tract and respiratory tract. Growth can range from very slow to explosively fast, and is associated with significant mortality and morbidity.[2]

Despite its name, it is generally not considered a true sarcoma, which is a tumor arising from mesenchymal tissue. KS actually arises as a cancer of lymphatic endothelium and forms vascular channels that fill with blood cells, giving the tumor its characteristic bruise-like appearance.

KS lesions contain tumor cells with a characteristic abnormal elongated shape, called spindle cells. The tumor is highly vascular, containing abnormally dense and irregular blood vessels, which leak red blood cells into the surrounding tissue and give the tumor its dark color. Inflammation around the tumor may produce swelling and pain.

Although KS may be suspected from the appearance of lesions and the patient's risk factors, a definite diagnosis can only be made by biopsy and microscopic examination, which will show the presence of spindle cells. Detection of the viral protein LANA in tumor cells confirms the diagnosis.

Vryheid District Hospital is located into the rural area in Abaqulusi Municipality, Zululand – Ulundi DC-26 Kwazulu Natal Province Republic of South Africa. It is known the high incidence and prevalence of HIV – AIDS in this area, that why as a logical consequence an increasing number of HIV – AIDS relatives' diseases are found. Vryheid Hospital has an organized CDC and Anti Retroviral Treatment Program instituted; it works in close coordination with Surgical, Natural & Bioenergetics and Pathologic Services.

Kaposi's sarcoma is not curable, in the usual sense of the word, but it can often be effectively palliated for many years and this is the aim of treatment... In KS associated with immunodeficiency or immunosuppressant, treating the cause of the immune system dysfunction can slow or stop the progression of KS. In 40% or more of patients with AIDS-associated Kaposi's sarcoma, the Kaposi lesions will shrink upon first starting highly active antiretroviral therapy (HAART). However, in a certain percentage of such patients, Kaposi's sarcoma may again grow after a number of years on HAART, especially if HIV is not completely

suppressed. Before the AIDS epidemic, Kaposi's sarcoma was seen primarily in elderly Italian and Jewish men, and rarely, in elderly women. Among this group, the tumors developed slowly. In AIDS patients, the cancer can develop very fast, and may also involve the skin, lungs, gastrointestinal tract, and other organs. The visceral lesions are generally asymptomatic and are most often discovered only at autopsy, though clinically, gastrointestinal bleeding can occur. As many as 33% of the patients with classic KS develop a second primary malignancy, which is most often non-Hodgkin lymphoma. [3,4,5]

Pain, one of the most common symptoms in palliative care, is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage (IASP, 1994). It is frequently inadequately treated, resulting in unnecessary suffering. The aim of palliative care is to allow patients to be pain free or for the pain to be sufficiently controlled that it does not interfere with their ability to function or their quality of life.

The concept of Total Pain was introduced by Dame Cecily Saunders, who described the overlapping components of pain as physical, emotional, social, and spiritual. The pain control is one of the most important tasks that Vryheid Hospital Team has been developed in treating the patients affected by Kaposi's sarcoma.

METHODOLOGICAL DESIGN

This is a Multidisciplinary Multi Centre Research, in developing. This research involved: CDC and A R T Programs, Oncologist Department from Durban and Pietermaritzburg Complex Hospitals and Primary Health Care Units.

Twenty seven patients affected by Kaposi's sarcoma from October 2004 to March 2008 were studied and treated, in all of them parallel with the HAART and Oncologist treatment, the main focus and emphasis were pain, symptom control and palliative care.

The general protocol was approved by the Ethics Committees of Vryheid Hospital and Department of Health Kwazulu Natal province; the relevant consents for performing surgical or/and Laboratory procedures were written in English and Zulu languages. This research is one component of our prospective longitudinal scientific protocol and its involved surgery, adjuvant therapies, oncologists, Anti Retroviral Treatment Program and Natural and Bioenergetics therapeutics tools. Several patients came into the hospital and clinics dependences with clinical manifestations of Kaposi's sarcoma, but the authors used as inclusion criteria on this study only the patients who have confirm histological diagnosis.

It is necessary to highlight as important issue in our scientific activity that one of the co authors, Dr. Shezi is an experienced South African doctor; Zulu speaker and well known into the rural communities belong to Vryheid District. He actively was involved in the patient's interviews for getting consents, in translating the protocols from English to Zulu languages as well as in following up patients together the coordinator of the team in rural areas at Boyana community.

RESULTS AND DISCUSSION

The patients affected by Kaposi's sarcoma have been showed multiple clinical symptoms and signs, some of them develop early lymphatic complications. A lymphadenopathic form of KS is common seen in Africa, primarily in prepubescent children (male: female ratio 3:1). In these cases, the generalized lymphadenopathy is frequently associated with visceral organ involvement. The prognosis is very poor with a 100% fatality rate within 3 years. [6,7]

The introduction of highly active antiretroviral therapy (HAART) has delayed or prevented the emergence of drug-resistant HIV strains, profoundly decreased viral load, led to increased survival, and lessened the risk of opportunistic infections. [8,9]

There are several types of Kaposi sarcoma, including:

- Classic Kaposi sarcoma.
- African Kaposi sarcoma.
- Immunosuppressive treatment-related Kaposi sarcoma.
- Epidemic Kaposi sarcoma.
- No epidemic Kaposi sarcoma.

In Africa, where antiretroviral therapy (ART) is not yet freely available, pain in HIV/AIDS is still a significant problem. In two South African studies on rural and urban patients with AIDS, the incidence of pain ranged from 91–98% of patients (Norval, 2004). Even in areas where ART is available, pain control and palliative care will still be

a very important part of care.

The more target age group affected by Kaposi's sarcoma in our study was 31 to 40 years with 14 patients. [Table 1] From 27 patients studied, 17 were females [63%], this data was similar to others studies about Kaposi's sarcoma.[3,5,12]. The high morbidity at early ages due to HIV – AIDS explained why the second leading age group in Kaposi's sarcoma was 21 to 30 years [table 1]

Figure 1

Table 1: K. S. patient's age and sex .October 2004 to March 2008

AGE GROUP	FEMALES	MALES	TOTAL
21 – 30	5	4	9
31 – 40	8	6	14
41 – 50	2		2
51 – 60	2		2
TOTAL	17	10	27

source: Vryheid cancer register.

The authors found that the main anatomical area target by Kaposi's sarcoma lesions was the inferior limbs, even in some of the studied patients these spots of K S were reported by the patients before known their immune status [table 2]

Figure 2

Table 2: main lesions localizations of k.s

ANATOMICAL AREA	PATIENTS
LEGS	19
HEAD AND NECK	3
ARMS	2
PERINEUM	1
DISSEMINATED	2
TOTAL	27

Source: Vryheid Hospital Cancer Register

In people with AIDS, Kaposi's sarcoma is caused by an interaction between HIV, a weakened immune system, and the human herpesvirus-8 (HHV-8). Occurrence of Kaposi's sarcoma has been linked to the spread of HIV and HHV-8 through sexual activity. The patients who developed a disseminated Kaposi's sarcoma their evolution was worse them others. [Table 2]

People who have kidney transplants are also at risk for Kaposi's sarcoma.

African Kaposi's sarcoma is fairly common in young adult males living near the equator. One form is also common in young African children.

The use of HAART has been associated with a sustained and substantial decline in KS incidence in multiple large cohorts. [10,11,12,13,14,15]. In our study the patients commonly received the HAART at CDC and/or local clinic guidelines by the social workers or assistant nurses.

The authors use as a clinical tool of pain assessment The PQRST of Pain and the WHO Pain Ladder

Step 3 Severe Pain Strong opioid± non opioid± adjuvant

Step 2 Moderate Pain Weak opioid± non opioid± adjuvant

Step 1 Mild Pain Non opioid± adjuvant Pain Persisting or Increasing Pain Persisting or Increasing

The WHO Three-Step Analgesic Ladder

Step 1 Non opioid (e.g., paracetamol, aspirin) ± adjuvant (e.g., antidepressant)

If pain is not controlled on Step 1 analgesics, move to Step 2 by adding a weak opioid:

Step 2 Opioid for mild to moderate pain (e.g., codeine) ± non opioid± adjuvant

If an opioid for mild to moderate pain has been used to a maximum dose and the patient still has pain, then move to Step 3 by changing to a strong opioid:

Step 3 Strong opioid (e.g., morphine)± non opioid± adjuvant

During 4 years of following out K S patients the authors noted registered on the files 65 adjuvant analgesics treatment , 29 nerve blocks, 22 surgical procedures or manipulations, 25 heat therapies, 13 topical counter irritants and 7 digit puncture applied. [Table 3] The authors are convinced that some others procedures were done basically on the peripheral areas and they weren't registered on the clinic cards, but with the recorded data the main modality in pain control in our patients was the use of adjuvant analgesics associated with nerve blocks, heat therapy or manipulation / immobilization.

Figure 3

Examples of Adjuvant Analgesics

Adjuvant Analgesics	Example	Use
Corticosteroids	Dexamethasone Prednisolone	Bone pain Neuropathy pain Headache due to raised intra-cranial pressure Pain associated with edema and inflammation
Antidepressants	Amitriptyline	Neuropathy pain
Anticonvulsants	Carbamazepine Gabapentin	Neuropathy pain
Antispasmodics	Hyoscine butylbromide	Smooth muscle spasm (e.g., colicky abdominal pain, renal colic)
Muscle relaxants	Benzodiazepine, (e.g., Diazepam)	Skeletal muscle spasm Tension headache
Anxiolytics	Benzodiazepine (e.g., Diazepam, Alprazolam)	Anxiety-related pain
Bisphosphonates	Disodium pamidronate Zoledronic acid	Bone pain
NMDA receptor antagonist	Ketamine	Severe neuropathy pain or other pain unresponsive to morphine and other standard therapies

Adjuvant analgesics are of particular use in pain that is only partially sensitive to opioids.

- Neuropathic pain, bone pain, and pain associated with inflammation and sepsis are less sensitive to opioids.
- Pain associated with smooth or skeletal muscle spasm does not respond to opioids.
- Pain related to anxiety also benefits from adjuvant analgesics.

Adjuvant analgesics are important in the management of HIV-related pain Adjuvant analgesic drugs are used to enhance the analgesic effects of opioids, treat concurrent symptoms that exacerbate pain, and provide independent analgesia.

The Vryheid Hospital team uses currently Mouthwashes that help the mouth sores in K S patients.

Figure 5

Table 4: mortality in K S patients until March 2008

*Patients Treated Per year	digit puncture	TOPICAL COUNTER-IRRITANTS	HEAT THERAPY, INCLUDING ULTRASOUND	SURGERY MANIPULATION IMMOBILIZATION	NERVE BLOCKS	ADJUVANT ANALGESICS
2005	2	4	5	9	7	13
2006	1	6	7	5	11	16
2007	1	2	9	7	8	14
2008	3	1	4	1	3	12
TOTAL	7	13	25	22	29	65

*IN SOME PATIENTS 2 OR MORE PROCEDURES WERE APPLIED.

source: vryheid cancer register and patients clinical files.

Patients with a few local lesions can often be treated with local measures such as radiation therapy or cryosurgery.

Radiotherapy: Local pain due to tumor infiltration usually responds to local radiotherapy, irrespective of the histological type, tissue origin of tumor, or whether the tumor is termed radio-resistant. Palliative radiotherapy should employ the minimum dose of radiotherapy required to achieve the desired result given in the minimum number of treatment fractions. The doses used for the palliation of pain in patients with advanced disease are usually much less than the doses used to treat the cancer, and small but effective doses can often be delivered, even in previously treated areas.

Vryheid Hospital patients in general speaking weren't able to receive radiation therapy, due to the abovementioned problems highlighted on the INTRODUCTION, Surgery is generally not recommended in Kaposi's sarcoma management due to wound edges problems, but in our clinical study, 22 patients underwent palliative surgical procedures mainly for decompression, remove septic areas, immobilization or/ and manipulation for alleviating the pain.[table 3]

Nerve blocks may help with very bad pain. Drugs are injected right into the nerve that affects the painful area. They provide short-term pain relief by preventing the nerve from sending pain signals. Twenty nine patients from 2005 until March 2008 were benefit with the nerve blocks. On the current experience of the research team the nerve blocks is the procedure more strongly requested by K S patients.[table 3]It is the author project to teach the junior doctors in these procedure in order to expand it to the peripheral clinics and after hours.

Psychological, social and spiritual factors can play an important role in the aggravation or relief of pain. Assessing psychosocial and spiritual issues in a patient with chronic

pain requires the approach of an interdisciplinary team. On the patients who had more familial or /and community support their evolution was far better then others without proper psychological supporting.

The interaction among health units in Kwazulu Natal province allows that some procedures done in the studied patients were performed on the referral tertiary units:

A punch biopsy of the skin or an endoscopic, pleural, or transbronchial biopsy

Bronchoscopy: Pulmonary involvement typically is characterized by a slightly raised (submucosal) cherry-red lesion.

Esophagogastroduodenoscopy (EGD) or colonoscopy:

Medications as Interferons, Taxanes, Anthracyclines, Retinoids, Vinca alkaloid are used in treating the studied patients as a part of Kaposi's sarcoma oncology protocols.

At closing of information on 31 March 2008 thirteen patients affected by Kaposi's sarcoma had demised, nine females and four males majority of them due to the pulmonary and systemic complications of AIDS. [table 4]

{image:5}

source: vryheid cancer register and patients clinical files.

CONCLUSIONS

The multidisciplinary approach in pain, symptom control and palliative care in patients affected by Kaposi's sarcoma at Vryheid District Hospital level showed clinical and cost effectiveness.

The more target age group affected by Kaposi's sarcoma was 31 to 40 years with 14 patients.

From 27 patients studied, 17 were females [63%], this data was similar to others studies about Kaposi's sarcoma

the main anatomical area target by Kaposi's sarcoma lesions was the inferior limbs

Sixty five adjuvant analgesic treatments, 29 nerve blocks, 22 surgical procedures or manipulations, 25 heat therapies, 13 topical counter irritants and 7 digit punctures were applied on the studied patients.

Amitriptyline was the most used adjuvant analgesics

The nerve blocks are the most requested procedures by the patients of Kaposi's sarcoma in Vryheid Hospital premises.

Thirteen patients died during the analyzed period.

The prognosis of patients was better proportionally with the proper adherence of the relevant protocols, as well as the level of family and community support to them.

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