THERAPEUTIC ACTION

OF

Iresine celosia

IN NEOPLASTIC DISEASES

Study methods according to WHO recommendations

Managua, Nicaragua

1982 – 1994

Mr Efrain Contreras
in memoriam

Investigative Process by
Dr Alfonso Herdocia
in memoriam

Written by
Dr Maria Yvette Munguia
DEDICATION

To Mr Efrain Contreras in memoriam for devoting many years of his life to study the mother plant of Iresine celosia.

To Dr Alfonso Herdocia in memoriam for his collaboration during the investigative process with Iresine celosia.
ACKNOWLEDGEMENTS

To the Nicaraguan Ministry of Health
and the Medical Commission designed by the former
to carry out the investigative process.

To Eng. Jaime Frech, General Gerent,
Frech Laboratories, Nicaragua,
for his cooperation.

In a very special way, to all patients who
participated in this study and shared their sufferings
with a blind confidence in the expected release
that Iresine celosia would confer to them.
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This is a descriptive and retrospective study. It was carried out in 1982 by a medical commission designed by the Ministry of Health, led by Dr Alfonso Herdocia at Bertha Calderon Hospital in Managua. Subsequently, in 1994, a new study was carried out by Pharmates Sarl in Tipitapa, Nicaragua. That study was done to find out the equivalence of *Iresine celosia* herbal extract administered as sublingual drops.

The study involved 49 patients who voluntarily accepted to participate and undergo a strict medical following-up of their health disturbances. The main aim of this report is to inform both the Nicaraguan and the international Medical Community about the therapeutic benefits coming from *Iresine celosia*, as a new drug of natural origin that possesses the necessary optimal properties for the treatment of neoplastic diseases.

The present study reveals that *Iresine celosia* drug used as herbal extract and sublingual preparations is innocuous, safe and highly effective in neoplastic diseases such as:

1. Gastric cancer
2. Cervix uterine cancer
3. Leukemia
4. Breast cancer
5. Prostatic cancer
6. Hemophilia

At the same time, it can be used in diseases of psychiatric origin, such as neurosis and depression. Occasionally, its efficacy was observed in Alzheimer’s disease, sexual impotence and alcoholism, among others.

Since the nineties, *Iresine celosia* is prepared in three different dilutions recommended for daily use during 3 to 9 consecutive months, depending on the disease.

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*A Any of several hereditary blood-coagulation disorders in which the blood fails to clot normally because of a deficiency or an abnormality of one of the clotting factors. It is a recessive trait associated with the X-chromosome, manifested almost exclusively in males. It is not a neoplastic disease (translator's note).*
INTRODUCTION

Neoplastic diseases have existed many times ago but they were not so spread as they are so far. Currently, a great deal of research studies on their origin, risk factors, disease development and diagnostic and therapeutic methods of treatment according to the different types of neoplastic diseases have been carried out. Cancer is present worldwide in the epidemiological profile of each continent or country. As a member of the Central American isthmus, Nicaragua is not an exception. The profile of neoplastic diseases has enormously increased at different social levels and geographical zones of the country, probably due to the screening carried out in both state and private health units. It is very important to denote that in our country there is not an accurate statistical record of prevalence, morbidity and mortality rates caused by cancer, due to different factors involving the physician, the affected patient, the relatives and also the Ministry of Health. However, the amount of deaths caused by cancer is estimated as 30 % in the following order:

1. Prostatic cancer
2. Uterine cancer
3. Breast cancer
4. Gastric cancer
5. Skin cancer

Trying to stop or minimize neoplastic suffering, Science has used a diversity of therapeutic methods, such as:

1. Radiations
2. Production of both oral or intravenous anti-neoplastic drugs
3. Surgery
4. Support measures to palliatively minimize some symptoms affecting most patients suffering from cancer
5. Combination of the above methods

As a result, the treatment for a cancerous patient is uncomfortable, expensive, repetitive and occasionally renders no healing effect. Its effect is generally palliative. Adverse reactions more unpleasant than the treatment are also seen in almost 100 % of patients undergoing anti-neoplastic therapy. They are: alopecia, dropped nails, feminization, bone marrow depression, etc. As a result, the patient looks for other treatments and/or drugs to counteract those side effects.

Although those facts, very good results have been achieved with the treatment for neoplastic diseases. However, we believe that efforts should continue in order to research and produce new better and specific options to treat those diseases. On the basis of those ideas, the product we call today Iresine celosia was developed. It is completely natural and contains the same proportion of the active components present in products of chemical origin: glucocorticoids and glutapeptic acid. Satisfactory results have been observed in the treatment of different neoplastic diseases. It was firstly used in both benign and malignant tumors of the prostatic gland. They are described later and we hope they will be very useful for the medical community and mainly for all those patients that are today victims of neoplastic diseases.

HISTORICAL ANTECEDENTS

Tumoral or neoplastic processes constitute a pathology that has accompanied human beings since many years ago. When the man discovered that cells divided in a cyclic manner in order to survive, he was able to know and check the method that the mother cell used for transmitting genetic information to her daughters. Some time later and due to some factors, it was possible to identify the abnormal origin and development of some body cells and their effects or consequences for human life. That process was called “neoplasia” (new growth) or cancer. The effects of that disease were terrible and a great deal of study and research was
The first variant of treatment used for cancer. It dates from back to the XIX century. It provided a significant survival free from the disease". (5)

After some time, it was observed that radiotherapy contributed not only to diagnosis but to an alternative treatment for neoplasias.

In the forties, studies were conducted to find out anti-tumoral drugs. “After the demonstration in the forties that some drugs had some anti-tumoral effects, the National Cancer Institute began a program with the aim to select many of them. From 1955 up to 1975 more than 400 000 compounds were tested using the murine leukemia models P388 and Li210”. (5)

During the searching of anti-tumoral drugs, the algrulant agents (sulphured mustard) were discovered at the beginning of the interval between World War I and II. They have chemical origin.

Anti-neoplastic drugs from natural origin with cytostatic action exist many years ago, but they were used to treat other types of diseases, not necessarily cancer. Some of those drugs are:

1. “Podapilotoxin, extracted from mandrake⁶ plant: it was used as a domestic remedy by American Indians and the first colonists due to its cathartic, emetic and anti-helmintic properties”. (3)
2. “Alkaloids from Vinca: the beneficial properties of the periwinkle plant, a myrtle-like berry, have been described for many years in different parts of the world”. (3)

The fractionation of those extracts provided four active dimeric alkaloids:

- Vinblastine
- Vincristine
- Vinleurosine
- Vinrosidine

Approximately two decades ago, a revolution has occurred in cancer therapy. Although the obtained drugs contribute to patient improvement, they also present some degree of toxicity, in some cases neurological, limiting their use, mainly those from chemical origin.

In the sixties, Mr Efrain Contreras (1898 – 1986) discovered Iresine celosia plant and began to study how to develop an effective, safe and national-originated drug. Different studies following the scientific methodologies established for anti-neoplastic drugs have been conducted in relation to Mr Contrera’s discovery. The obtained results are described in the present paper. Phase I and II studies were conducted in the seventies and eighties, then they served to support a new research. The results are very good and encouraging for those patients suffering from neoplastic diseases.

It is important not to omit that the results showed in the present paper should encourage the medical community to continue researching on this subject.

**JUSTIFICATION**

The fact that neoplastic diseases represent a significant number in both public or private medical consulting rooms in our country and many patients are assisted by general and specialized medical doctors indicate that this kind of diseases can not be ignored or considered as a small part in medical daily routine.

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⁶ A southern European plant (*Mandragora officinarum*) having greenish-yellow flowers and a branched root. This plant was once believed to have magic powers because its root resembles the human body. That root contains the poisonous alkaloid hyoscyamine (Translator's note).
Although the benignity or limited development of a neoplastic disease, once a patient is aware of his/her sickness, he/she immediately gets concern about the possibility of recovery, time and cost of the therapy and the need of surgery and risks involved on it. All those facts plus the impact on the family generate a great deal of concern to the patient. However, the most affecting facts are comments coming from other neoplastic patients or their relatives about the side reactions provoked by cancer therapy or the agony suffered during the disease. It gets worse if the comments refer that although all efforts the patient did not improve and died.

Science has moved forward and made efforts to discover the so dreamed “cure for cancer”. Scientists and medical doctors have contributed to create and modify many cancer therapies.

**PROBLEM PRESENTATION**

Every process altering normal body functions, homeostasis and morphological characteristics of the cell is considered abnormal and defined as a disease. Diseases in which anatomically and functionally abnormal cells appear are considered neoplasias. In the popular context they are frequently called cancer. Generally, every disease responds to its specific therapy. Manufacturing cancer therapeutic drugs is highly expensive; therefore, cancer therapy results very expensive for patients. The medical community knows very well the side reactions provoked by such drugs; they affect the psycho-affective condition of the cancerous patient who is urged to consume other drugs to attenuate those undesirable reactions. As a result, the patient needs to consume different drugs at the same time. The ideal therapy for a cancerous patient requires maximum safety, less side reactions, low cost and, if possible, national drug manufacturing.

In the sixties, Efrain Contreras, a naturalist researcher, discovered the anti-tumoral properties of *Iresine celosia*, a plant living in Nicaragua. Based on different experimental analyses, he considered it would be included in the therapy for neoplastic diseases. Based on his personal observations, the following question was stated:

Which was the therapeutic action of *Iresine celosia* plant, from Amaranthacea Gomphreniodea Family, in neoplastic diseases in Managua, Nicaragua, during the period comprised between 1982 and 1994?

**GENERAL OBJECTIVE**

Specifically, to inform the Nicaraguan Medical Community and also the International Medical Community about the therapeutic benefits provided by *Iresine celosia* as a new drug from natural origin with optimal conditions for cancer therapy in general, and particularly for prostatic cancer.

**SPECIFIC OBJECTIVES**

I. To describe the properties and therapeutic effect of different dilutions of *Iresine celosia* on signs and symptoms corresponding to neoplastic diseases observed in patients involved in the study.

II. To describe side reactions and toxicity observed in patients undergoing *Iresine celosia* therapy.

III. To know the pharmacological parameters related to *Iresine celosia* effectiveness in cancer therapy.

IV. To identify other diseases in patients participating in the study that can be treated with *Iresine celosia*.

V. To identify neoplastic diseases in patients participating in the study responding to *Iresine celosia* therapy.
THEORETICAL FRAMEWORK

The therapeutic method to fight against neoplastic diseases has been longtime discussed. It is necessary to know the problem very well, from its origin, to attack it successfully. Neoplasias are characterized by the production of abnormal cells called neoplastic cells. Their functions are altered in comparison with those of normal cells and at the same time they multiply or proliferate by cell division. The whole population of abnormal cells should be eliminated to obtain good therapeutic results.

Leading principles on cancer chemotherapy

“Knowledge on cell cycle kinetics is essential to correctly use the current generation of anti-neoplastic agents.” (3)

Many of the most potent cytostatic agents act on the specific stages of the cell cycle; for that reason they are only active on cells carrying out the division process.

“Normal tissues with rapid proliferation (bone marrow, pilous follicles and intestinal epithelial lining) are often damaged by some of those potent cancer drugs; that toxicity limits their use.” (3)

According to the above statements, the following conclusions are achieved:

I. “Only one clone-generating malignant cell can originate a progeny enough for killing the host; for that reason, it is necessary to eliminate those cells in order to cure...host's lifetime duration is inversely proportional to the number of inoculated malignant cells or those surviving the therapy”. (3)

II. Immune mechanisms and other host's defensive mechanisms play an insignificant role in cancer therapy, unless only a small number of malignant cells are present.

III. Cell death caused by anti-neoplastic drugs follows a first-order kinetics; it means a constant cell percentage instead of a constant cell number is killed with a given therapy.

The logical result of those concepts has been the attempt to achieve the fatal cell death with the use of different chemotherapeutic agents administered simultaneously or rationally sequenced.

Generalities on different kinds of cancer therapies

1. Surgery

It continues to be the unique curative treatment in many of the solid tumors most frequently found. It has a very important role not only in therapy, but in tumor diagnosis and classification.

2. Radiotherapy

It is a local modality used as cancer therapy. Ideally, it would destroy only neoplastic tissue, causing the minimal damage to the normal neighboring cells.

2. Chemotherapy

It is the available primary therapy for spread malignant diseases. It can also be used as an adjuvant in surgery and its purposes would be the elimination of the undetectable micrometastatic disease.
Chemical originated agents can be used (Fluorinated Pirimidine, S-Fluorouracil, Citarabin, etc) or those from natural origin (plant alkaloids). Their use depends upon the kind of the tumor, its stage and the medical criteria. They are highly effective, however they produce side reactions such as:

- Idiosyncratic Pneumonitis
- Chemical arachnoiditis
- Gastrointestinal toxicity, characterized by nausea, vomiting and diarrhea
- Bone marrow depression
- Neurotoxicity: Ataxia, drowsiness; neuropathies, paralysis of cranial nerves, weakness of limbs
- Reactions in skin and other related zones: alopecia, disseminated maculae, lost of nails
- Haematological disturbances
- Hepatotoxicity
- Endocrine disturbances: feminism in males such as galactorrhea, gynecomastia, etc
- Fever and shivers

The use of radiotherapy can also produce similar side reactions.

Surgery involves diverse risks, depending upon health condition, age and type of the patient’s tumor and also uncomfortable procedures after surgery (drainages, curing, catheterisation, suture removing, laboratory tests, etc.). It is advantageous because it is generally carried out only once, except in those cases the tumor relapses, whereas chemotherapy requires various long-lasting cycles. In some cases both therapies can be used, causing more disturbances to the patient.

If a survey is done among different cancerous patients and they are asked the question: Which characteristics should be considered suitable for a neoplastic drug?

Probably, the answer would be:

- Minimum side reactions during therapy
- High therapeutic efficacy
- Affordability to all patients
- Non toxic effects
- Comfortable application

Many attempts have been done to produce a drug showing the above characteristics. The product currently called Iresine celosia has been obtained as a result of those efforts. It comes from natural origin, based on an extract from Iresine celosia, a Nicaraguan plant belonging to Amaranthacea Gomphrenoidea family, discovered in the sixties by Mr Efrain Contreras. Its properties were studied, showing anti-tumor activity.

Originally, it was called Codin VII and used in Phase I and II clinical studies. In the eighties and nineties a Phase II study using Iresine celosia presented as encapsulated herbal extract was conducted; it was supervised by Dr Alfonso Herdocia and Dr Roberto Calderon in
coordination with the Ministry of Health, represented by Dr Roberto Zapata. That study confirmed the high cytostatic and anti-mitotic power of *Iresine celosia* and its safety during its application. The study was designed to treat specifically a group of malignant tumors, as it was easy to follow-up the involved participants.

“The product (*Iresine celosia*) contains two anti-mitotic drugs: glucocorticosteroids and glutapeptic acid, both extensively used in the current cytostatic drugs existing in the market.”

(6)

Tumors treated with *Iresine celosia* came from the digestive system, uterus, breast and mainly from the prostatic gland. Very good results were obtained. It is important to denote that *Iresine celosia* was used to treat other type of symptoms or disturbances affecting patients involved in the study. In fact new possibilities for the use of *Iresine celosia* were indirectly discovered. That finding motivated the involvement of other patients suffering from other kind of diseases, not necessarily cancer.

Because of the economical situation occurring in the country by that time, the manufacturers of the drug had to move to Switzerland. Later on, from 1994 to 1996, *Iresine celosia* was presented in different congresses in France as a new pharmaceutical presentation: 2X, 4X and 7X dilutions.

*Iresine celosia* is a flavonoid showing a unique chemical structure in the flavonoid group. It is a cytochrome-flavoprotein with a powerful anti-oxidant action over the cells. Research studies on its mechanism of action have demonstrated that it alters the permeability of the cancerous cell due to changes in the bioelectrical potential of the membrane. *Iresine celosia* is administered by oral and sublingual route. Generally, the therapy with *Iresine celosia* takes at least three to six months; it can vary according to the medical criteria and patient’s evolution.

*Iresine celosia* is produced in Nicaragua by *Laboratorios Frech de Nicaragua*. Taking into account the great number of patients suffering from cancer an important effort has been done to sell the product at a reasonable price.

It is necessary to continue studying *Iresine celosia*, but at the same time it can be used as an alternative for patients suffering from the terrible experience of a cancerous disease.

It is important to emphasize that this cancer chemotherapy research represents a very and interesting subject in Medicine.

**MATERIALS AND METHODS**

This is a descriptive and retrospective study. The universe was made up by all patients suffering any disease, mainly cancer, who attended Dr Herdocia’s consulting office in Managua.

The whole sample consisted in 49 patients.

**TECHNIQUES AND PROCEDURES**

Data-collection was done by filling patients’ clinical records and recording their following-up; it was done by physicians. Previously, patients were explained about the study and they authorized their participation. All of them received *Iresine celosia* free of charge and under medical supervision.

Patients’ age ranged between 18 and 80 years, both sexes. The following parameters were used to evaluate the evolution of the disease:

1. Size reduction of the existing and palpable tumor
2. Improvement or total disappearance of the existing signs and symptoms
3. Radiographic or endoscopic controls
Tabulation plan

Tabulation of the information was done manually, using the ‘stick’ method and a pocket calculator.

The analysis was done in terms of frequency and percentage. The results are showed in tables and graphs, according to variables.

Information was registered in the clinical records; they were kept at Bertha Calderon Hospital. They were destroyed after 10 years, according to the hospital policy.

Analysis plan

Variables:
- Sign
- Symptom
- Toxic side reactions
- Type of pathology
- Pharmacological effect
- Effective dose

Crossing of variables:
- Effective dose
- Signs and symptoms with the obtained effect
- Toxic side reactions

OPERATIONALISM OF VARIABLES

<table>
<thead>
<tr>
<th>Variable</th>
<th>Concept</th>
<th>Scale</th>
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<tbody>
<tr>
<td>Sign</td>
<td>Objective finding perceived by an explorer. It is referred by the patient and checked by the physician during a physical examination</td>
<td>Palpable tumor size</td>
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<tr>
<td></td>
<td></td>
<td>Existing pain</td>
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<td></td>
<td></td>
<td>Active hemorrhage</td>
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<td></td>
<td></td>
<td>In situ metastasis</td>
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<td></td>
<td></td>
<td>Vaginal secretion</td>
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<tr>
<td>Symptom</td>
<td>Subjective parameter of a disease or a change in the condition, as it is perceived by the patient</td>
<td>General mood</td>
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<td></td>
<td></td>
<td>Depression</td>
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<td></td>
<td></td>
<td>Anxiety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Headache</td>
</tr>
<tr>
<td>Toxic side reaction</td>
<td>Undesirable effect or response that appears after the exposition, ingestion or application of any substance to the human body that can produce poisoning or death</td>
<td>Gastrointestinal disorders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neurotoxicity</td>
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<td></td>
<td></td>
<td>Alopecia</td>
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<td>Skin maculae</td>
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<td></td>
<td></td>
<td>Bone marrow depression</td>
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<tr>
<td></td>
<td></td>
<td>Immuno suppression</td>
</tr>
<tr>
<td>Type of pathology</td>
<td>Type: Kind or representative class</td>
<td>Prostatic cancer</td>
</tr>
<tr>
<td></td>
<td>Pathology: Medicine’s branch that studies the characteristics, origin and effect that a specific disease causes on the body</td>
<td>Breast cancer</td>
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<tr>
<td></td>
<td></td>
<td>Gastric cancer</td>
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<td></td>
<td></td>
<td>Cervix-uterine cancer</td>
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<td></td>
<td></td>
<td>Leukemia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neurosis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Others: Depression, sexual impotence</td>
</tr>
</tbody>
</table>
Effective dose

Dose: amount of a drug or another substance administered at once

- 7 – 10 capsules
- 4 – 6 capsules
- 1 – 3 capsules

Effective Dose: Drug dose which achieves the expected effect when it is applied into a human being or laboratory animal

Pharmacological effect

Change or transformation caused by the intake or application of a specific drug on a sign or symptom of a disease

Positive pharmacological effect: the resultant effect produced when the specific drug is used and an improvement or elimination of the signs or symptoms is observed

Negative pharmacological effect: when the specific drug is used and no changes on signs or symptoms of the specific disease are observed

RESULTS

In table 1:

*Iresine celosia*’s pharmacological effect on signs and symptoms of neoplastic diseases are shown. They were divided in positive and negative. In those 10 aspects taken into account, 100% positive effect with *Iresine celosia* used as a neoplastic drug was observed.

In table 2:

The rate of toxic side reactions occurring during the application of *Iresine celosia* in every patient treated with that drug corresponded to 0% for each of the different types of toxic side reactions more commonly observed during the use of other neoplastic drugs.

In table 3:

Doses in which *Iresine celosia* was able to produce a positive effect on different neoplastic diseases observed in the study are shown. Prostatic, gastric and cervix-uterine cancer react to *Iresine celosia* in doses of 7 to 10 capsules. Breast cancer requires 7 capsules. In the case of leukaemia and haemophilia the required dose was 6 capsules. The unique patient showing sexual impotence responded to 4 to 6 capsules. Patients presenting other diseases different from cancer responded to 4 to 6 capsules of *Iresine celosia*.

In table 4:

The neoplastic diseases undergoing *Iresine celosia* therapy in the present study and their corresponding number of patients are shown.

1. Cervix-uterine cancer  6 patients
2. Gastric carcinoma  5 patients
3. Breast carcinoma  3 patients
4. Prostatic adenoma  3 patients
5. Haemophilia  2 patients
6. Leukemia  2 patients

As a total, 21 patients suffering from neoplastic diseases were studied.
In table 5:

Some non-neoplastic diseases treated with *Iresina celosia* are shown. They were observed in patients presenting a neoplastic disease concomitantly. Neuroses were the most frequently observed (8 patients) followed by anxious-depressive syndrome (4 patients).

Other diseases were sporadic showing a frequency equal 2 for peripheral neuritis, irritable bowl syndrome and Briquet’s syndrome.

Occasionally, a patient suffering from one of the following diseases was observed:

- Hepatic disease
- Alcoholic abstinent syndrome
- Aura-free migraine
- Early sexual impotence
- Stress
- Radicle compressive syndrome
- Blood hypertension secondarily after hysteria-like syndrome
- Neuro-vegetative syndrome
- Student’s situational reactive syndrome
- Menopause

The treatment with *Iresina celosia* was effective in a total of 28 non-neoplastic diseases.

**DISCUSSION**

The natural originated product named *Iresina celosia* possesses anti-tumoral properties; that cytostatic action was observed in patients suffering from neoplastic diseases who improved or cured. We consider this product has anti-mitotic properties, as it reduces the size of palpable tumors up to their elimination and recidivism is not observed.

In those cases of cervix-uterine cancer, *Iresina celosia* provokes the elimination of vaginal secretions (bloody or not) and cancer-associated pain as well.

“In those patients long time operated on breast carcinomas who came back due to *in situ* or distant metastases, the former disappeared 12 or 15 days after treatment and the latter improved significantly” (6).

In gastric carcinomas “Pre-operation doses reduce invariably the size of palpable tumors...then surgery and more drug (6 – 8 months after surgery) and a periodical radiographic following up and sometimes gastroscopy have demonstrated it works successfully. None of those patients have died or showed recidivism although they were old and presented bad health conditions” (6).

*Iresina celosia* has curing or palliative effects on blood dyscrasias, specially in haemophilia. However, only two patients were studied. More investigation involving a higher number of patients is required.

A palliative or curing effect was observed in leukemic patients, but it was not quantified during Dr Herdocia’s research, probably because only two patients suffered from that disease.

In patients suffering from prostatic adenoma up to 30-40 % size reduction of the prostate gland was observed and also a reduction of pain and urinary symptoms. Finally, the prostate gland recovered its original size. It is important to stress that a patient with prostatic disorders who had already been operated, stopped the treatment with *Iresina celosia* and after that he suffered again from prostate disorders. Another patient who did not want to be operated due to his old age and cultural factors was treated with *Iresina celosia* as an alternative therapy with good results. Those results indicate this therapy can be used for that disease in the near future.
It is important to denote that in this study some cancerous patients were also suffering from psychiatric and psychological diseases, such as different types of neurosis and anxious-depressive syndrome; in both cases, the therapy with *Iresine celosia* demonstrated its efficacy. Occasionally, some patients suffering from psychiatric disorders commonly found in aged persons close to forties or sixties were observed. They received 4X dilution. Although those diseases were not the objective of this study, this finding is reported.

Those patients were followed up. It was found that *Iresine celosia* is an anti-depressive and anti-anxious drug. Its therapy eliminates the acute picture of depression, such as adrenergic or sympathetic-mimicking symptoms.

An improvement was observed in the patient suffering from the student’s reactive-situational syndrome, consisting in more energy and willingness to continue studying and more capacity to understand and analyze. For those results it was considered that *Iresine celosia* improves memory and space-orientation.

An evident improvement of the patients’ general mood was observed, independently if they suffered or not from a neoplastic disease.

Finally, in the patient showing early sexual impotence “sexual activity came into normal in about 90 days taking the same daily dose of *Iresine celosia*”. That phenomenon was also observed in patients with prostatic disorders as well. The early sexual impotence is considered psychogenic or secondary to the existing pain symptom; however, those patients responded the same way as the former.

Concerning toxic reactions due to *Iresine celosia*, no side reactions of any kind were observed in any patient during the study. The most common and upsetting (organic, aesthetic and psychological) reactions for the patients were taken into account to evaluate that parameter. The fact that non-toxic reactions were observed demonstrates the safety of *Iresine celosia* during its use on different cancerous diseases.

The effective dose producing all the already mentioned results varied according to the type of tumor or the other existing disease. In general, it can be affirmed that for benign and malignant tumors 10 capsules of the herbal extract were used daily. In 1994 *Iresine celosia* began to be formulated as sublingual drops. In all dilutions, 5 to 10 drops have been used; the strengths differed in the moment they were taken. *Iresine celosia* 2X was taken before breakfast, 4X one hour before of after lunch and 7X one hour before or after dinner.

When used as anti-depressive, the dose is adjusted to 3 to 5 drops delivered as explained above. If it is intended for prophylactic use, to get new energy, improve memory, etc. the recommended dose is 1 to 3 drops.

Sublingual route is the best for optimal absorption. According to the present study, 3 to 6 months of uninterrupted therapy are required to be discharged as a result of the total remission of the disease. It really depends upon different factors that only a physician is able to evaluate; for that reason a professional following-up is required.

It is important to emphasize that most of the patients who received *Iresine celosia* therapy had no other option to maintain their lives according to their physicians’ opinions.

“If they would not be treated with that drug, they would die” (6). This represents an encouraging possibility for many cancerous patients in deplorable conditions.

During the research work some patients suffering from other diseases together with or different from cancer were found. Those diseases were classified as psychological, psychiatric, orthopedic, gastroenterological and gynecological ones. They are:

Menopause, irritable bowel, neurosis and senile compressive-radicle syndrome. All of them responded satisfactorily to *Iresine celosia* therapy. It means it can be considered not only as
an anti-neoplastic drug but an anti-anxiety (4X, sublingual) as well. It can be used also in orthopedic and ginecological disorders, but that use requires more study. The use of 4X dilution has been studied in patients suffering from psychological, psychiatric disorders, etc. Possibly the use of that dilution together with 2X and 7X dilutions will be useful to treat psychological and psycho-somatic disorders present in a person diagnosed as cancerous. In that case, *Iresine celosia* becomes a powerful drug to treat such disorders.

Neoplastic diseases found in the present study showing a good response to *Iresine celosia* therapy were:

1. Gastric carcinoma
2. Cervix-uterine cancer
3. Prostatic cancer
4. Leukemia
5. Haemophilia

In the field of oncology, the above diseases are those on which *Iresine celosia* therapy will be recommended in the near future.

**CONCLUSIONS**

1. *Iresine celosia* is a potent antitumoral, antimitotic and cytostatic drug: it can 100 % eliminate all common and frequent signs and symptoms observed in the studied neoplastic diseases.

2. *Iresine celosia* is a safe and effective drug: it showed 0 % toxic side reactions in patients receiving this therapy.

3. *Iresine celosia* is effective by oral and sublingual routes, using doses according to the clinical situation.

4. *Iresine celosia* therapy is effective and useful in psycho-psychiatric diseases and also in others such as orthopedic and ginecological ones. It is considered a potent anti-anxious and anti-depressive drug so it can be prescribed for neurosis and depressions.

5. The use of *Iresine celosia* is highly effective in gastric, cervix-uterine, breast and prostatic cancer. It could have an effect not yet defined on haemophilia and leukemia.

**RECOMMENDATIONS**

1. To carry out an informational and promotional campaign for the use of *Iresine celosia* therapy, prioritized in areas of oncological assistance.

2. To produce and distribute the product massively.

3. To carry out a Phase III clinical study for the anti-neoplastic drug *Iresine celosia* in any health unit where cancerous patients are assisted. It should be supported by the Ministry of Health.

4. To carry out in parallel an educational campaign to prevent different types of cancer and contribute to reduce its morbidity and mortality.

5. To submit the obtained results to the medical community in order to stimulate the research on *Iresine celosia* drug by means of the collaboration among a greater number of physicians.
BIBLIOGRAPHY


Table 1. Pharmacological effect of *Iresine celosia* on signs and symptoms corresponding to the studied neoplastic diseases.

<table>
<thead>
<tr>
<th>Sign or Symptom</th>
<th>Pharmacological effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing palpable tumor</td>
<td>Positive</td>
</tr>
<tr>
<td>Existing pain</td>
<td>Positive</td>
</tr>
<tr>
<td>Active hemorrhage</td>
<td>Positive</td>
</tr>
<tr>
<td><em>in situ</em> metastasis</td>
<td>Positive</td>
</tr>
<tr>
<td>Distant metastasis</td>
<td>Positive</td>
</tr>
<tr>
<td>Vaginal secretion</td>
<td>Positive</td>
</tr>
<tr>
<td>General mood</td>
<td>Positive</td>
</tr>
<tr>
<td>Depression</td>
<td>Positive</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Positive</td>
</tr>
<tr>
<td>Cephalalgia</td>
<td>Positive</td>
</tr>
</tbody>
</table>

**Source:** Patients’ clinical records. Managua, 1982 - 1994

Table 2. Toxic side reactions of *Iresine celosia*.

<table>
<thead>
<tr>
<th>Toxic side reaction</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal disturbances</td>
<td>0</td>
</tr>
<tr>
<td>Neurotoxicity</td>
<td>0</td>
</tr>
<tr>
<td>Hepatotoxicity</td>
<td>0</td>
</tr>
<tr>
<td>Alopecia</td>
<td>0</td>
</tr>
<tr>
<td>Skin maculae</td>
<td>0</td>
</tr>
<tr>
<td>Bone marrow depression</td>
<td>0</td>
</tr>
<tr>
<td>Immunosuppression</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>0</strong></td>
</tr>
</tbody>
</table>

**Source:** Patients’ clinical records. Managua, 1982 - 1994
Table 3. Effective dose of *Iresine celosia* on different diseases.

<table>
<thead>
<tr>
<th>Name of the disease</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostatic carcinoma</td>
<td>7 – 10 capsules/drops</td>
</tr>
<tr>
<td>Gastric cancer</td>
<td>7 – 10 capsules/drops</td>
</tr>
<tr>
<td>Cervix-uterine cancer</td>
<td>7 – 10 capsules/drops</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>7 capsules/drops</td>
</tr>
<tr>
<td>Leukemia</td>
<td>6 capsules/drops</td>
</tr>
<tr>
<td>Haemophilia(^a)</td>
<td>6 capsules/drops</td>
</tr>
<tr>
<td>Sexual impotence</td>
<td>4 – 6 capsules/drops</td>
</tr>
<tr>
<td>Others (non-neoplastic diseases)</td>
<td>4 – 6 capsules/drops</td>
</tr>
</tbody>
</table>

**Source:** Patient’s clinical records. Managua, 1982 – 1994

Table 4. Neoplastic diseases and number of patients treated with *Iresine celosia*.

<table>
<thead>
<tr>
<th>Name of the disease</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastric carcinoma</td>
<td>5</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>3</td>
</tr>
<tr>
<td>Cervix-uterine cancer</td>
<td>6</td>
</tr>
<tr>
<td>Haemophilia(^a)</td>
<td>2</td>
</tr>
<tr>
<td>Leukemia</td>
<td>2</td>
</tr>
<tr>
<td>Prostatic adenoma</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

**Source:** Patients’ clinical records, Managua, 1982 – 1994
<table>
<thead>
<tr>
<th>Name of the disease</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurosis</td>
<td>8</td>
</tr>
<tr>
<td>Anxious-depressive syndrome</td>
<td>4</td>
</tr>
<tr>
<td>Peripheral neuritis</td>
<td>2</td>
</tr>
<tr>
<td>Irritable bowl syndrome</td>
<td>2</td>
</tr>
<tr>
<td>Briquet’s syndrome</td>
<td>2</td>
</tr>
<tr>
<td>Hepatic disease</td>
<td>1</td>
</tr>
<tr>
<td>Alcoholic abstinent syndrome</td>
<td>1</td>
</tr>
<tr>
<td>Aura-free migraine</td>
<td>1</td>
</tr>
<tr>
<td>Early sexual impotence</td>
<td>1</td>
</tr>
<tr>
<td>Menopause</td>
<td>1</td>
</tr>
<tr>
<td>Stress</td>
<td>1</td>
</tr>
<tr>
<td>Senile chronic radicle compressive syndrome</td>
<td>1</td>
</tr>
<tr>
<td>Secondary arterial hypertension</td>
<td>1</td>
</tr>
<tr>
<td>Neuro-vegetative syndrome</td>
<td>1</td>
</tr>
<tr>
<td>Student’s situational reactive syndrome</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>28</strong></td>
</tr>
</tbody>
</table>

**Source:** Patients’ clinical records. Managua, 1982 – 1994