

DOCUMENT SOURCE University of California at San Francisco Special Collections Library, San Francisco CA	
RECORDS SERIES TITLE BOLDREY, EDWIN BARKLEY, PAPERS	
ACCESSION NO. MSS 88-56	COPY
FILE CODE NO.	
CARTON NO. 6/25	
FOLDER NAME CANCER BOARD 1949-50	
NOTES	
FOUND BY ANDY MUFNER 11/9/94	

722114

THE THERAPY OF MALIGNANCY OF THE HEMATOPOIETIC SYSTEM
by
John S. Lawrence, M.D.

The main clinical disorders that will be discussed are leukemia, malignant lymphoma and multiple myeloma. Leukemia may be separated into the acute and the chronic types. No treatment other than palliative measures is known for the acute forms of the disease, unless the results reported by Farber with aminopterin are established in a large number of cases. Certainly, this is the only therapeutic measure to date that offers any hope of aid to victims of this type of leukemia.

The chronic forms of the disease are more amenable to therapeutic procedures. It must be remembered, however, that none of the therapeutic measures used thus far are curative. Discussion of therapy of chronic leukemia will include the following: Roentgen irradiation, arsenic, radioactive phosphorus (P^{32}), urethane, nitrogen mustard and folic acid inhibitors. In the author's opinion, roentgen irradiation is the most satisfactory method of treatment for all of the chronic forms of leukemia. It is important that irradiation be given in small repeated dosages rather than in large dosages. Dowdy and Lawrence emphasized this in a report in 1941. They have confirmed their statements in many instances since then. If irradiation is given as indicated by them, practically no nausea or vomiting occur. All forms of chronic leukemia respond to this type of therapy. The white blood cell count is the most important indicator of the response which the patient is getting to irradiation while treatment is being carried out.

Daily determinations of the level of the white blood cells should be made during the treatment period. Any marked diminution in this level is taken as an indication for withholding of therapy until the white count becomes stabilized. The aim is to produce a steady gradual decline in the level of the white blood cells and, of course, improvement in the general symptomatology. The level of the blood platelets as indicated in the daily blood smears also serves as a useful guide. A marked diminution in the number of platelets should result in cessation of irradiation therapy.

Treatment with Arsenic

Lissauer (1865) was the first to use arsenic in the treatment of leukemia. Forkner revived interest in its use in 1931. Its field of usefulness is in chronic myelogenous leukemia. It causes a typical remission in this condition but is of little or no value in the other types of leukemia. It is necessary to give it up to the point of toxicity in order to get satisfactory results. It is a form of therapy that has never enjoyed great popularity.

Treatment with P^{32}

The indications for and the results obtained from this type of therapy are essentially the same as those from roentgen irradiation except that the reduction in the size of the spleen may not be so great with P^{32} as with roentgen irradiation. Dr. John H. Lawrence has had more experience with this form of therapy than anyone else.

No portion of this material may be quoted, copied, or reproduced in any fashion without written permission from the copyright holder.

1160897

DOCUMENT SOURCE	University of California at San Francisco Special Collections Library, San Francisco CA	
RECORDS SERIES TITLE	BOLDREY, EDWIN BARKLEY. PAPERS	
ACCESSION NO.	MSS 88-56	COPY
FILE CODE NO.		
CARTON NO.	6/25	
FOLDER NAME	CANCER BOARD 1949-50	
NOTES		
FOUND BY	ANDY MUGNETZ 11/9/94	

Lawrence: Therapy of Malignancy of the Hematopoietic System. Page 2

The proponents of this type of therapy mention the lack of irradiation sickness as a strong point in its favor. However, roentgen irradiation given as indicated by Dowdy and Lawrence is not associated with nausea and vomiting of any extent.

Treatment with Urethane

Paterson and her associates were the first to report this type of therapy. One to two grams three times daily are the accepted dosage. Good responses are obtainable in chronic myelogenous leukemia. Inconstant results are said to be produced in chronic lymphatic leukemia. It is of no use in acute leukemia. The limiting factor is the gastro-intestinal symptoms which are prone to occur. It is an adjunct to irradiation therapy but is not as satisfactory as irradiation.

Treatment with Nitrogen Mustard

The first clinical application of this type of treatment was by Gilman, Goodman and others as reported by Gilman and Phillips in 1946. The dosage is 0.1 mg. per kilogram of body weight in courses of one to seven daily injections. The results obtained from this chemotherapeutic agent in the leukemias have not been entirely satisfactory. Although remissions have been obtained, they have not usually been of as long duration as following irradiation.

Treatment with Folic Acid Inhibitors

Considerable work has been and still is being done with this group of substances. It is too early to make any satisfactory evaluation of them in leukemia. The work of Farber in Boston and Leht in New York indicate that these drugs may change the course of acute leukemia. They are two edged weapons and must be handled with extreme caution.

LYMPHOMA

For purpose of discussion, the classification of Gall and Mallory will be used. It is as follows:

1. Stem cell lymphoma
 2. Clasmatoeytic lymphoma
 3. Lymphoblastic lymphoma
 4. Lymphocytic lymphoma
 5. Hodgkin's lymphoma
 6. Hodgkin's sarcoma
 7. Follicular lymphoma
- (Reticulum Cell Sarcoma)

Roentgen irradiation constitutes the most reliable method of treating these disorders. Follicular lymphoma is said to respond most readily to treatment, but this is not universally true. Lymphoblastic lymphoma, reticulum cell sarcoma and Hodgkin's sarcoma are the most resistant forms to therapy. More satisfactory results may be obtained in lymphocytic lymphoma and Hodgkin's lymphoma. Nitrogen mustard has proved of benefit in Hodgkin's disease that has become resistant to roentgen irradiation, and in cases with wide dissemination and marked toxicity. Combined treatment with nitrogen mustard and roentgen irradiation has proved more efficacious in selected cases.

No portion of this material may be quoted, copied, or reproduced in any fashion without written permission from the copyright holder. Reproduction from Special Collections, The Library, University of California, San Francisco

DOCUMENT SOURCE University of California at San Francisco Special Collections Library, San Francisco CA	
RECORDS SERIES TITLE BOLDREY, EDWIN BARKLEY. PAPERS	
ACCESSION NO. MSS 88-50	COPY
FILE CODE NO.	
CARTON NO. #23 6/25	
FOLDER NAME CANCER BOARD 1949-50	
NOTES	
FOUND BY ANDY MUGNETZ 11/9/94	

Lawrence: Therapy of Malignancy of the Hematopoietic System. Page 3.

Multiple Myeloma

No satisfactory form of therapy has been found for this disorder. Roentgen irradiation and/or folic acid inhibitors may be of benefit in relieving pain when this is due to soft tissue tumors. Stilbaridine has not been of any distinct benefit in our hands but is said to relieve pain.

Treatment of Complications

Hemorrhagic manifestations, thrombopenia, leukopenia, infections, pregnancy, acute surgical conditions, anemia, and acute hemolytic crises may occur as complications of any of these disorders. The handling of these complications presents distinct problems in individual cases. General as well as specific types of treatment must be resorted to in certain instances. Allen has reported good results as regards the control of bleeding by the use of toluidine blue. Antibiotics may be of great value in some of the active infections. Pregnancy may complicate the picture tremendously and must be handled as a distinct problem in each instance. Acute surgical complications must be treated in the conventional way but the risk is much greater than in the normal patient. Transfusion of blood may be of temporary value in some patients who have marked anemia. In general, transfusions offer little and are to be discouraged. Acute hemolytic crises, when they occur, makes it necessary to consider splenectomy.

Treatment of Psychosomatic Symptoms

Malignant diseases of the hematopoietic system are frequently associated with marked psychosomatic symptoms. These require the art rather than the science of medicine. Much can be done to relieve this part of the symptomatology by wise and sympathetic counseling.

Reproduction from Special Collections, The Library, University of California, San Francisco. No portion of this material may be quoted, copied, or reproduced in any fashion without written permission from the copyright holder.