Long-Term Results of Palliative and Radical Radiotherapy of Hodgkin's Disease

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Since 1948, 196 cases of Hodgkin's disease have been seen in the Division of Radiotherapy, Department of Radiology, Stanford University School of Medicine. Of these, 8 were seen in consultation only and received no treatment in the department. to confirm or establish the clinical stage of disease. However, lymphangiography was not performed routinely in the department prior to January, 1962, and the staging of cases admitted prior to that date is therefore subject to appreciable error (1, 3, 9).

Survival in the remaining 188 cases has been analyzed by the actuarial method of Berkson and Gage (2), without correction for natural attrition. All charts have been reviewed in an attempt

1 Some of the cases included in this report were treated under clinical research protocols (8) supported by Grant CA 05838 from the National Cancer Institute, NIH, Bethesda, Maryland.

Our treatment policies for Hodgkin's disease have changed considerably over the years covered by this report. During the years 1948-51, all cases, regardless of stage, were treated palliatively with 200-kv X-rays, usually receiving tumor doses of about 400-1000 r in 1-2 weeks over fields limited to clinically involved regions. An unplanned clinical trial was started in 1951, in which some patients with regionally localized disease were
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CHART 3. Follow-up data on 3 groups of patients with Stage I and II Hodgkin's disease treated more than 5 years ago: (a) palliative kilovoltage radiotherapy (400-1000 r in 1-2 weeks); (b) "radical" kilovoltage radiotherapy (2000-4000 r in 3-4 weeks); (c) radical wide-field megavoltage radiotherapy (3500-4000 rads in 4 weeks). The only survivor in the palliatively treated group was retreated radically for recurrent disease 23 months after his initial course.

Chapters 4 and 5 are available for download in PDF format. The results in this series are presented in charts 1-5. As may be seen in Chart 1, survival was 48.8% at 5 years in the entire series of 188 treated cases of all stages, and 59.0% in the 129 cases which had received no prior treatment elsewhere. Since megavoltage radiotherapy has only been employed since 1956, survival in the period beyond 5 years, and particularly beyond 10 years, is dominated by the cases treated with 200-kv X-rays.

In Chart 2, survival curves for regionally localized cases in presumptive Stages I and II are presented. Only 10 of the regionally localized cases were considered to be Stage I; of the remaining 78 Stage II cases, 30 had documented constitutional symptoms. Thus, our regionally localized cases are not directly comparable with those of Easson and Russell (4), since 30 of our cases would be shifted to Stage III in the Easson classification. Survival in the small group of palliatively treated cases is obviously much less satisfactory than that in the radically treated cases. In the linear accelerator group, treated exclusively with megavoltage X-rays, actuarial survival declined during the first 4 years to 82.4%, at which level it has now persisted unchanged into the 9th year. This actuarial value is in remarkably good agreement with the observed 5-year survival of 15 (79%) of 19 radically treated Stage I and II cases actually at risk for 5 years or more (Chart 3). The fact that the survival curve for the megavoltage-treated Stage I and II cases of Chart 2 has remained flat since the 4th year is consistent with the view that most of the disease-free, long-surviving cases have been permanently cured (4) and supports the argument presented elsewhere in this conference for the more aggressive use of tumoricidal dose levels in the treatment of Hodgkin's disease (6).
and Stage IV cases indicates the validity of a 4-stage clinical classification of Hodgkin's disease (10). Analysis of the results of 2 different dose levels of palliative radiotherapy for Stage III disease (Chart 5) indicates the superiority of the more intensive, though still essentially palliative, treatment made possible by megavoltage X-rays.

References

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