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THE ROLE OF COMBINED THERAPY IN SUPRATENTORIAL ASTROCYTOMAS (*)

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SUMMARY

In this study, 128 patients with III-IV grade malignancy brain gliomas at Neurosurgical Department of Atatürk University, Medical School, Erzurum, Türkiye. The results were analysed retrospectively. In one group with 86 patients operations were performed with the purpose of maximum removal of the tumor. Radiotherapy was not applied to these patients, because they did not accept the radiotherapy. In the second group with 42 patients, surgical we conclude that, suplementing posptoperative conventional radiation therapy has no beneficial effect on the cases rquality of survival.

Key words: Supratentorial astrocytomas, combined therapy, radiotherapy

INTRODUCTION

Despite the efforts made for achieving better therapeutic results in cerebral astrocytoma by improving both the operative and irradiation technique, there has been no marked success as concerns prognosis (1-5). Also many attempts have been made to the therapeutic effect of various chemotherapeutics (2,5). (Grien et al,1 1975, Gilbert Kagen, 1979, Jellinger, 1981, 1983, Cianfraglia et al. 1988, Saleman et al. 1982, Walker et al. 1980, Hatlevoll 1985).

These considerations lay at the basis of our 9 years follow-up study of patients with astrocytoma of high degrees of malignancy receiving surgical treatment with or without irratiation. The applied treatment was the same.

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MATERIAL AND METHODS

The study was carried out on 128 patients with astrocytoma of high degrees of malignancy (Grade III-IV-Kernohan).

To evaluate the treatment efficiency, the cases were analysed in two groups. In the firts group, with 86 patients, surgical intervention were performed with the aim of maximum removal of the tumor, creating internal decompression at the expense of the surrounding white matter in functionally less significant zones. In the second group with 42 patients, surgical intervention was supplemented by conventional irradiation therapy (Table 1).

Table 1. Astrocytomas III-IV In Brain

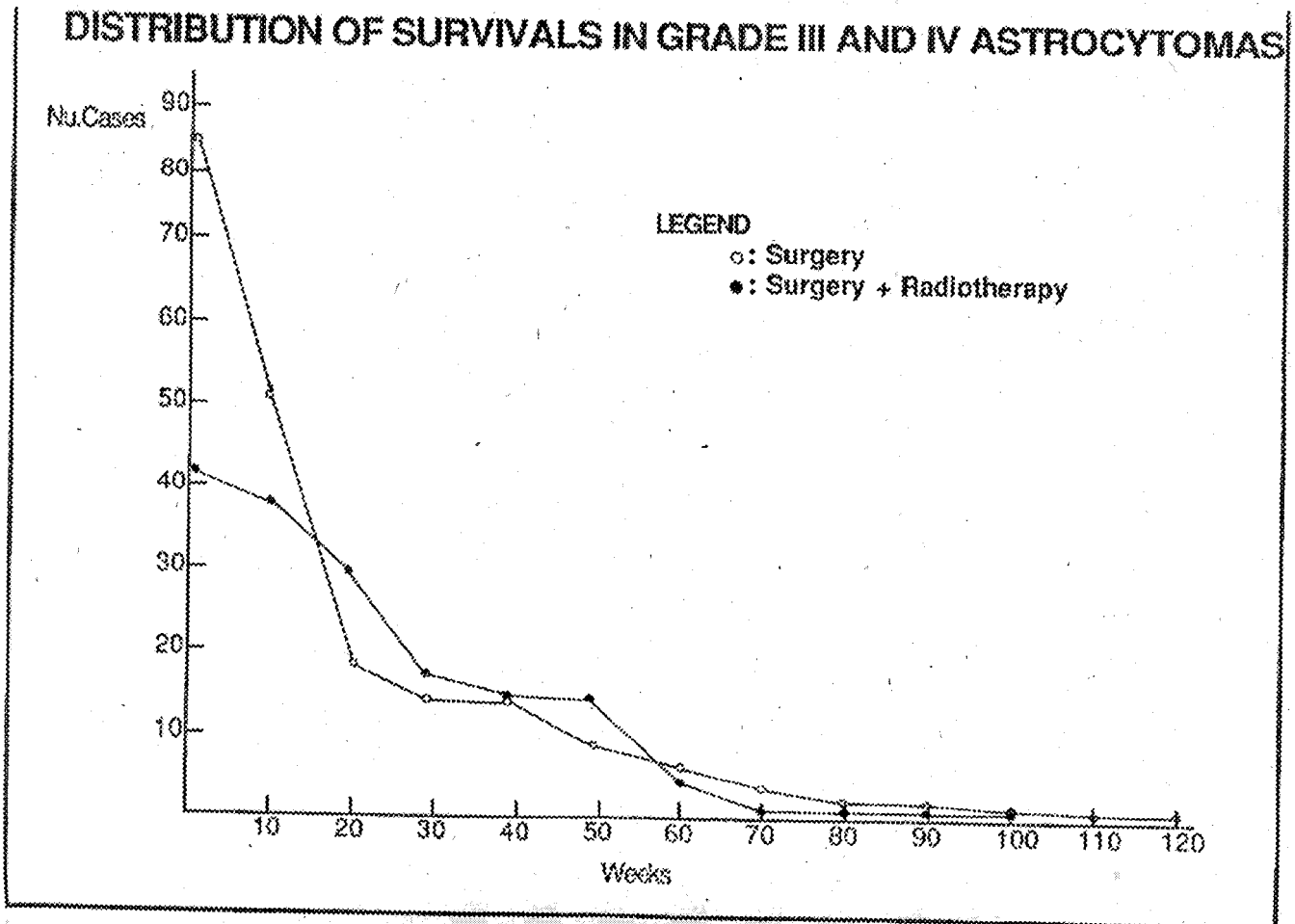
Localisation	Surgery	Surgery+ Radiotherapy	Total %
Frontal	25	14	30.5 % (39)
Parietal	24	9	25.8 % (33)
Temporal	31	17	37.5 % (48)
Occipital	6	2	6.2 % (8)
Total	86	42	100 % (128)

The results were evaluated by the survival criteria, performance scale and the reactive cystic formation at the site of the mass, necrosis or marked brain edema zone as well as a combination of these three processes.

RESULTS AND DISCUSSION

The results were evaluated by the commonly used survival criteria and clinical performance scale. Radiotherapy in association with the surgical intervention was followed by the reactive cystic formation at the site of the mass of necrosis zone as well as a combination of these two processes. Also, in the second group, marked brain edema and intracranial hypertension was observed.

The study shows that; supplementing postoperative conventional radiation therapy in the supratentorial astrocytomas has no beneficial effect on the cases or quality of survival. In addition, the first group has better results as compared to the second one (Figure 1). We consider that radiotherapy applied in cerebral grade III and IV astrocytomas, has no beneficial effect on the cases of quality of survival. Radiotherapy in association with the surgery was followed by reactive cystic formation at the tumor site or necrotic zone as well as a combination of these two procedures.


DISTRIBUTION OF SURVIVALS IN GRADE III AND IV ASTROCYTOMAS
Nu.Cases
90
80
70
60
50
40
30
20
10
LEGEND
○: Surgery
●: Surgery + Radiotherapy
10
20
30
40
50
60
70
80
90
100
110
120
Weeks

REFERENCES

1. Constantinovici A, Cristescu M: Efficiency of the Radio-Chemo-surgical Treatment in Cerebral Astrocytomas, Zent. Bl, Neurochir 50: 109-114, 1989.

2. Cooper JA, Voeok RL, Ransohoff J, et al: Malign Glioma: Results of Combined Modality Therapy. Jama 248: 62-65, 1982.

3. Hatlevolly R: Combined Modality Treatment of Operated Astrocytomas Grade 3 and 4. Cancer 56: 41-47, 1985.

4. Jellinger K, Volc D, Grisold W, et al: Multimodality Treatment of Malign Gliomas. Comparison of Several Adjuvant Approaches. Zent. Bl. Neurochir. 42: 99-122, 1981.

5. Romodanov SA, Sosnov YUD, Annin EA, Meledez EM: Results of Combined Treatment of Malignant Cerebral Glioma. 8 th European Congress of Neurosurgery, Abstract book, Barcelona, 1987, pp. 370.