122. Carcinoma of the Oesophagus—Operation or Radiation

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Summary. Extent of tumour is the decisive factor in prognosis. Of 804 patients seen, 513 (64%o) had no evidence of wide-spread tumour and were in sufficiently good general condition for cure to be attempted by irradiation or surgery. Within the group of 513 less unfavorable patients, as judged by three-year survival rates, those irradiated did better than those treated by surgery (P < 0.05) whatever the sex, age, or site. Females did better than males (P < 0.01) whatever the treatment, age or site. Young patients did better than the elderly (P > 0.05) whatever the treatment, and in the case of females. The site of the tumour in the oesophagus had little prognostic significance in this particular series.

Key words: Carcinoma — Oesophagus — Radiotherapy — Operation — Prognosis

Zusammenfassung. Die Prognose hängt hauptsächlich von der Ausdehnung des Tumores ab. Aus 804 beobachteten Patienten zeigten 513 (64%o) keinen Beweis eines ausgedehnten Tumores, und deren allgemeiner Zustand erlaubte den Versuch, Genesung durch Bestrahlung oder Operation zu erzielen. Innerhalb der günstigeren Gruppe von 513 (nach 3 jähriger Überlebung bewertet) waren die Ergebnisse nach Bestrahlung besser als die nach Operation, sowohl für beide Geschlechter als auch in allen Altersgruppen und für alle Lokalisationen (P < 0.05). In jeder Behandlungsgruppe reagierten Patientinnen besser als Patienten (P < 0.01) in allen Altersgruppen und für alle Lokalisationen. Jede Behandlung war unter jüngeren Patienten erfolgreicher als unter älteren (P < 0.05), besonders unter den Patientinnen. Die Lokalisation des Tumores innerhalb des Oesophagus machte in dieser Serie prognostisch wenig aus.

Schlüsselwörter: Carcinoma — Oesophagus — Strahlentherapie — Operation — Prognose.

Eight hundred and four patients with squamous oesophageal cancer are the subject of this study. They represent nearly the whole experience of the disease during the years 1956 to 1967 in the population of 1 1/3 million persons in Southeast Scotland. Their prognosis in respect of three years survival is studied in relation to tumour extent, treatment, sex, age and site.

Tumour Extent

The extent of tumour was the dominant factor influencing prognosis. Two hundred and twenty six patients had evidence of blood borne distant metastases, fistula to the trachea or bronchi, other evidence of direct spread beyond the oesophagus, lymph node metastases at a distance from the primary tumour, primary more than 9 cm in extent, or various combinations of these factors. Because of the extent of tumour detected, none of these 226 patients was offered radical treatment by either radiotherapy or surgery. Only 18 (8%o) survived more than one year, 2 more than three years and none more than five years.
In these 226 patients radical treatment was contra-indicated mainly because of:

- Distant metastases: 35 patients
- Fistula: 21 patients
- Other spread beyond oesophagus: 37 patients
- Remote node metastases: 84 patients
- Primary tumour > 9 cm: 49 patients

Total: 226 patients

Five hundred and seventy eight patients had no such evidence of very extensive tumour. Sixty-five of these were not offered radical radiation or surgical treatment because of serious cardio-pulmonary or cerebro-vascular disease, or advanced age (39 of the 65 were aged over 75 years). Only 1 of these 65 lived just over one year. The remaining 513 patients were treated with curative intent by radiation or surgery. Within this group the only differences in tumour extent known before treatment were in respect of the length of tumour demonstrable by radiography and endoscopy. Whilst nearly half of the small number of patients with tumours no more than 3 cm in length survived three or more years, only one of the patients with a 9 cm tumour survived three years, within the range from 4 to 8 cm (which includes the bulk of the radically treated patients) no relationship between tumour size and survival could be demonstrated. However, the search for a relationship between tumour size and survival in this range is marred by the marked tendency to offer radical treatment to older patients only if they have small tumours, which probably boosts the survival rate of the group with larger tumours and reduces the survival rate of those with smaller tumours.

Of the 513 patients selected for radical treatment because of the limited extent of their tumours, 83 (16%) survived three or more years.

Treatment

In the 226 patients with extensive tumour and the 65 patients with other serious diseases, three year survival occurred only in exceptional circumstances and accordingly further study of the relationship between treatment and three year survival in these groups was not pursued.

Of the 513 patients with less extensive disease, 265 were treated by radical irradiation and 248 by surgery. Fifty six per cent of the irradiated patients, compared with 46% of those treated by surgery, were over 65 years old. However, 61% of those irradiated compared with 47% of those surgically treated were female. The age advantage to the surgical group may be balanced by the sex advantage to the irradiated group (Table 1).

Thirty seven per cent of the irradiated patients compared with 69% of those surgically treated had lower oesophageal tumours—that is more than 30 cm from the alveolar margin. The excess of lower half tumours is an advantage within the surgical series although the dearth of such tumours is not known to be a disadvantage within the irradiated series.

In respect of tumour extent the very precise radiographic estimate of tumour size made for each patient treated by radical irradiation is not available for