A REVIEW OF THE TREATMENT OF DIFFUSE MALIGNANT PLEURAL MESOTHELIOMA

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INTRODUCTION

The frequency of mesothelioma is considered to be low: 0.10 to 0.25 per 100,000 (Cutler & Goreng, 1975; Greenberg & Lloyd Davies, 1974; McDonald et al., 1970). Average survival is now less than 12 months (Borow et al., 1973; Elmes, 1973). However, in asbestos-exposed workers, it is possible that in the coming decades the rate of mesothelioma will be 5-11% (Newhouse & Berry, 1976; Selikoff, 1977). It would therefore be useful to survey these high-risk groups in order to detect the tumour at an earlier stage. It might thus be possible to obtain better results than those obtained with the treatments that are used at present for diffuse mesothelioma, although it is difficult to evaluate the efficacy of any treatment procedure because of the low number of cases and the lack of controlled trials.

SURGICAL TREATMENTS

Pleurectomy stops pleural effusion and relieves pain (Hertzog & Toty, 1968; Martini et al., 1975), but survival is unchanged (Hertzog & Toty, 1968; Ratzer et al., 1967). Pleuropneumonectomy (Bamler & Maaben, 1974; Butchart et al., 1976) is rarely possible because of extension of the tumour to the chest wall and/or the mediastinum; the mortality rate is 28.5% (Chahinian & Holland, 1978) and the length of survival is unchanged, although a better selection of patients might permit better results (De Laria et al., 1978). Metastatic involvement of the chest wall can result from any of these surgical procedures.

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RADIOTHERAPY

This is a palliative method (Borow et al., 1973; Oels et al., ; Ratzer et al., 1967; Shearin & Jackson, 1976). With a median of 4500 rads, which is well tolerated, median survival may be up to months (Eschwege & Schlienger, 1973; Schlienger et al., 1969).

It has been suggested that Au^{198} might be injected intrapleurally an early stage (Reichert & Sherman, 1959).

CHEMOTHERAPY

Scattered reports of the use of various chemotherapeutic agents e failed to demonstrate any clear-cut activity of these drugs (Aisner iernik, 1978). Alkylating agents, and especially cyclophosphamide, e been the most commonly used compounds (Gerner & Moore, 1974; Jara al., 1977); and the objective response rate obtained with alkylating nts was 30% (Legha & Muggia, 1977a,b). However, doxorubicin seems be the most promising (Aisner & Wiernik, 1978); the results of bined radiotherapy and doxorubicin administration were similar to se with adriamycin alone (Chahinian et al., 1976). Several poly- motherapeutic regimens have also been tried (Aisner & Wiernik, 1978), d combinations including doxorubicin have had the best rate of response ap et al., 1978); however, the results are no better than those tained with doxorubicin alone.

OTHER THERAPEUTIC METHODS

Combinations of different therapeutic methods might be promising artini et al., 1975; Worn, 1974). On the other hand, steroids and lc pleurodesis are ineffective.

CONCLUSIONS AND FUTURE PROSPECTS

In the future, a programme for detection, including questionnaires, rays, ferruginous body counts and thoracoscopy, might be developed for igh-risk groups. A cooperative, controlled therapeutic trial should e undertaken. These programmes should also include a diagnosis onfirmed by a panel of pathologists and a staging of the disease on the asis of clinical examination of local and metastatic extension. The hoice of therapeutic procedures to be tested should take into account he small number of cases and prior clinical results and experimental ata (Chahinian et al., 1979).

SUMMARY

When the disease is diagnosed early, pleurectomy or intrapleural inoculation of colloidal radioactive compounds may be effective. However, most mesotheliomas are already diffuse by the time they are diagnosed; and no treatment has been shown to be effective. Metastatic involvement of the chest wall results from any surgical procedure; however, pain may be controlled by pleurectomy and/or external-beam radiotherapy. Of the chemotherapeutic agents tested, doxorubicin appears to be the most promising. Large, cooperative, controlled trials are needed to evaluate the usefulness of one or a combination of the treatment methods described.

RESUME

Si la maladie est diagnostiquée de bonne heure, la pleurectomie ou l'inoculation intrapleurale de composés radioactifs colloïdaux peuvent être efficaces. Mais la plupart des mésothéliomes sont déjà diffus au moment de leur diagnostic et aucun traitement ne s'est avéré efficace. Une atteinte métastatique de la paroi thoracique résulte de tout mode opératoire chirurgical; la pleurectomie et/ou la radiothérapie à faisceau externe peuvent cependant réduire la douleur. Parmi les agents chimiothérapeutiques testés, la doxorubicine semble le plus prometteur. De vastes essais collectifs contrôlés sont nécessaires pour évaluer l'utilité de l'une ou d'une combinaison des méthodes de traitement mentionnées.

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