MALIGNANT PLEURAL MESOTHELIOMA: SURVIVAL AT ONE YEAR

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SUMMARY

To study the survival of patients with malignant pleural mesothelioma after one year, a prospective follow up study was conducted at medical A unit of Khyber Teaching Hospital, Peshawar from Jan 1997 to July 2000. A total of 13 patients with the above diagnosis were recruited in the study. One patient died with in one month while 5 patients died before three months. At six months only 4 patients were still alive. At the end of one year only a single patient was still alive. The mean survival was 3.3 months while the median survival was 3 months.It is concluded that with out any treatment the overall prognosis for patients with mesothelioma is very bad compared to the world literature.

INTRODUCTION

Nearly 3000 to 4000 patients are diagnosed as malignant pleural mesothelioma (MPM) in USA every year. It is further reported that the incidence of MPM is expected to peak in the next two decades.[1,2] Although the role of asbestos is established as an etiological agent but hunt for other agents has been on and Simion virus 40 might be another causative agent.[3,4] The three histological variants, epithelial, sarcomatoid and mixed, have prognostic implications.[5,6,7] Similarly other variants like age of onset, gender, chest pain & stage of disease at time of diagnosis are important predictors of patient's survival.[5] However, the median survival of patients without treatment is 4 to 12 months. Single modality treatments like chemotherapy, radiotherapy or surgery alone don't make significant improvement in the survival.[8,9,10] However patients treated with multimoda-lity treatment schedules demonstrated survival benefits[11]. This study was conducted to see the survival of MPM in our setup, without offering any treatment modality.

MATERIAL AND METHODS

Patients diagnosed as Malignant Pleural Mesothelioma in Medical A Ward, Khyber Teaching Hospital Peshawar, from

Jan 1997 to July 2000 were recruited in the study. Patients were diagnosed on the basis of clinical history, examination, chest radiography, CT scan chest and closed pleural biopsies. Histological reports were gathered. However the histological reports did not comment on the histological classification and thus the relationship with histological classification and survival could not be studied. Patients were asked to report back at intervals of one month, three months, six months, and twelve months, if alive. If patients died, relatives were requested to inform about it. On follow up patients were examined and chest radiographs were taken.

All patients after initial diagnosis were intubated with Argyll intercostal chest tube and pleural effusions were drained until no more then 100 ml. / day came out. Then pleurodesis was performed with 1 gm. Of Oxytetracycline.

RESULTS

Total thirteen patients were recruited in this study. Of these eight (61.5%)were male and five (38.5%)were female. Ages of these patients ranged between forty eight years and seventy-five years, with the mean age of 58.3 years and median age of 56 years.

Total thirteen patients were enlisted in this study. One patient died within one month (7.7%) and five patients died before three months time, so total six patients (46.2%) were dead at three months. On six months time, three more patients died, so that total nine patients (69.2%) were dead at six months. During the next six months three more patients died, so at the completion of study that is twelve months, only one patient was alive (7.7%) while twelve had died (92.3%).

The Mean survival rate for MPM was 3.3 months while the Median survival was 3 months.

DISCUSSION

MPM is a mesodermally derived neoplastic disease that arises in the pleura and grows relentlessly into the adjacent structures i.e. lung and heart, until it ultimately results in the death of the patient.[2,11]

Malignant pleural effusion is not a very common disease. Malignant pleural effusions are basically of two types, MPM and Metastatic Adenocarcinoma of pleura. It is quiet difficult to distinguish between these two conditions histologicaly. It requires histochemical, immunochemical, and elec-

FOLLOW UP OF MALIGNANT PLEURAL MESOTHELIOMA PATIENTS AT ONE YEAR

	ALIVE			DEAD			
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	Grand total
1 month	7	5	1 2 (923%)	1	0	1	1 (7.7%)
3 months	5	2	7 (53.8%)	2	3	5	6 (46.2%)
6 months	3	1	4 (30.8%)	2	1	3	9 (69.2%)
1 year	1	0	1 (7.7%)	2	1	3	12 (92.3%)

TABLE-1

tron microscopic techniques to make the distinction.[12,13]

MPM arises primarily as a result of exposure to asbestos[12] although other etiologies have been described.[14] Recently the presence of simian virus 40(SV40) gene like sequence in mesothelial tumor cells has been described[15]. It is a significant finding because SV40 contaminated polio vaccine has been used between 1955 and 1963 in the world.[16,17]

Three histological varieties of MPM are described in the literature.[18] These variants are Epithelial, Sarcomatous, and Mixed types. Of these epithelial has the best prognosis while sarcomatous has the worst prognosis.[1]

The presentation of MPM is usually nonspecific with symptoms of dyspnoea, cough and chest pain. Physical examination frequently demonstrates a pleural effusion. Commonly there is a delay of 3 to 6 months , from the onset of symptoms to diagnosis, resulting in patients having advanced disease at the time of diagnosis.[19]

The tests available to confirm the diagnosis of MPM include radiological procedures like chest radiographs, chest CT scan and MRI. As well as invasive techniques such as thoracocentesis and pleural biopsy.[20,21]

Staging patients with MPM is difficult because there is no universally accepted classification system.[12] The Butchart, the TNM, and the revised Brigham staging systems are frequently used, although the former two do not stratify disease stage with survival.[22,23,24]

There are different treatment options available for patients with MPM. These include single modality therapy and combined modality therapy. Only combined modality therapy has made some positive difference to the survival of these patients,[12] Without treatment the median survival of patients with MPM is between 4 and 12 months.[1]

A better prognosis for survival can be expected in patients with good performance status, absence of chest pain, age greater then 50 years and epithelial histology.[5]

CONCLUSION

As evident from our results as well as from international data that the median survival rate for MPM without treatment is very low, it is therefore recommended that proper histological classification may be carried out and patients must be offered single or multiple modality treatments for better survival rate. Further studies are needed to study the impacts of these treatment modalities on the survival of MPM patients.

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