MARS trial: Decortication and chemotherapy associated with worse outcomes for patients with resectable mesothelioma

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Extended pleurectomy decortication combined with chemotherapy is associated with worse survival outcomes, a higher incidence of serious
adverse events, and a diminished quality of life compared to platinum and pemetrexed chemotherapy alone, according to research presented at the International Association for the Study of Lung Cancer (IASLC) 2023 World Conference on Lung Cancer in Singapore.

The UK multicenter, randomized trial, known as MARS 2, conducted by a team led by Professor Eric Lim from The Royal Brompton Hospital, United Kingdom, investigated the impact of extended pleurectomy decortication combined with chemotherapy compared to chemotherapy alone in patients with mesothelioma.

Mesothelioma, a rare and aggressive cancer primarily linked to asbestos exposure, has prompted exploration into various treatment options, including surgical procedures like pleurectomy decortication. However, despite its common use, the effectiveness of this intervention has never been evaluated in a randomized trial.

The trial, which enrolled 335 participants, randomly assigned 169 patients with resectable mesothelioma to extended pleurectomy decortication and 166 patients to chemotherapy (platinum and pemetrexed) or chemotherapy alone. The researchers followed patients for a median 22.4 months.

Patients randomized to surgery and chemotherapy exhibited a median survival of 19.3 months, while those randomized to chemotherapy alone demonstrated a median survival of 24.8 months. However, the hazards for death were non-proportional, prompting the presentation of primary outcomes in two timeframes: randomization to 42 months and beyond 42 months. The analysis indicated a 28% increase in the risk of death in the surgery group within the first 42 months, while no significant difference in survival emerged after 42 months, Lim reported.

Moreover, the research unveiled significant disparities in progression-
free survival and adverse events between the two groups. The surgery group experienced a 3.6-fold higher incidence of serious adverse events (CTCAE grade 3 and above), and Dr. Lim reported that patients who underwent surgery reported poorer quality of life and well-being on various EORTC health-related quality of life scales, particularly in global health, physical functioning, social functioning, and role functioning. The surgery group also exhibited worse positive symptom scores, including pain, dyspnea, insomnia, loss of appetite, and financial difficulties.

Prof. Lim concluded that extended pleurectomy decortication should not be offered to patients with pleural mesothelioma and classifying this disease as "unresectable" from the outset would increase access to more effective systemic treatments to improve survival for patients with early-stage disease.

Provided by International Association for the Study of Lung Cancer

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