

INPLASY PROTOCOL

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No potential conflicts of interest were disclosed.

Moesin and poor prognosis of breast cancer: a systematic review

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Review question / Objective: To investigate the correlation between MSN and tumor prognosis.

Condition being studied: Tumor metastasis is a complex step and lymph node metastases always affect the prognosis of patients. Moesin, an adaptor protein, acts as a crosslinker between membrane and actin cytoskeleton, which could regulate tumor cell invasion and metastasis. Barros et al. demonstrated that moein over expression was related to the elevated risk of death (P= 0.022) in oral cancer. Recently, Yu et al. showed that moesin was related with lymph node metastasis (P<0.0001), and data of the survival analysis also demonstrated that moesin was related with the poor prognosis of breast cancer.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 09 August 2020 and was last updated on 09 August 2020 (registration number INPLASY202080039).

INTRODUCTION

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patients. Moesin, an adaptor protein, acts as a crosslinker between membrane and actin cytoskeleton, which could regulate tumor cell invasion and metastasis. Barros et al. demonstrated that moein over expression was related to the elevated risk of death (P= 0.022) in oral cancer. Recently, Yu et al. showed that moesin was related with lymph node metastasis (P<0.0001),

and data of the survival analysis also demonstrated that moesin was related with the poor prognosis of breast cancer.

METHODS

Search strategy: Terms: " moesin", " membrane-organizing extension spike protein", "Msn protein", "moesin protein", "MSN protein", "breast cancer*", "Breast Neoplasm*", "Breast Tumor*", "Breast Cancer*", "Mammary Cancer*", "Malignant Neoplasm of Breast", "Breast Malignant Neoplasm*", "Malignant Tumor of Breast", "Breast Malignant Tumor*", "Cancer of Breast", " Cancer of the Breast", "Mammary Carcinoma*", "Human Mammary Carcinoma*", "Human Mammary Neoplasm*" and " Breast Carcinoma*". Database: PubMed database, Web of Science, Embase and Cochrane database.

Participant or population: Patients.

Intervention: Surgery, chemotherapy and radiotherapy are common therapeutic methods for breast cancer. Owing to the drug resistance and distant metastases after therapy, the prognosis of breast cancer is dismal. Moesin could act as a crosslinker between membrane and actin cytoskeleton, and take part in the tumor progression. Previous studies demonstrated that moesin was a poor prognostic biomarker in oral cancer, recent researches on breast cancer also demonstrated that moesin had a close link with the poor prognosis.

Comparator: Adjacent normal tissue.

Study designs to be included: This study include the research background, introduction, search strategy, inclusion and exclusion of literatures, data extraction, quality assessm.

Eligibility criteria: (a) Clinical researches; (b) Articles of the correlation between moesin and breast cancer metastasis or prognosis; and (c) Include some studies that MSN are related to tumor progression.

Information sources: PubMed database, Web of Science, Embase and Cochrane database.

Main outcome(s): The primary outcome was that moesin is closely related with poor prognosis of breast cancer.

Data management: At first, deletion duplicate articles; then, removing publications with inclusion criteria-ineligible after reading titles and abstracts; finally, clear included records after reading full texts.

Quality assessment / Risk of bias analysis: Using Reporting Recommendations for Tumor Marker Prognostic Studies (REMARK guidelines) to standardize report format and improve report quality.

Strategy of data synthesis: We will provide a narrative synthesis of the findings from the included studies.

Subgroup analysis: The subgroup analysis is not planned.

Sensibility analysis: Not applicable.

Country(ies) involved: China.

Keywords: Moesin; prognosis; systematic review; breast cancer.

Contributions of each author:

Author 1 - Yang Liu - choose research directions and revise the manuscript.

Author 2 - Xiaoli Hu - write the manuscript.

Author 3 - Chengcheng Li - guide the writing practice.