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Research Article

Lymph Node Dissection for Colon Cancer in Older Patients: D2 or D3?

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ABSTRACT

Background: The aim of the study is to compare the short-term and long-term results in the treatment of colon cancer in older patients with different extents of Lymph Node Dissection (LND).

Materials and Methods: A retrospective multicenter study in general surgical geriatric department and specialized coloproctological hospitals of Sechenov University was performed between 2006 and 2015. Patients aged 75 years or older who underwent stage I-III colon cancer surgical treatment were included in the study. Groups were divided according to the extent of surgery: colon resection with D3 LND formed the study group and with D2 LND - the control group.

Results: The mean age of patients in the study was 81±4 years. Charlson's comorbidity index before surgery was higher in the D3 LND group ($p < 0.001$). Surgical and anaesthetic risk had no significant differences between the groups ($p = 0.580$). Operation time with D3 LND was 25 min longer than with D2 LND, with no differences in blood loss between the groups. Despite the increased surgery duration, prolonged ventilation time was similar ($p = 0.093$). D3 LND results in increasing in postoperative morbidity ($p = 0.013$) with no significant differences in 30-day, 90-day and 1-year mortality between the groups. D3 LND demonstrated significant improvement in five-year overall and disease-free survival. According to the multivariate analysis, male gender, stage III tumors and D2 LND increase the risk of death within five years after surgery.

Conclusion: D3 LND in colon cancer surgical treatment in older patients does not affect the 30-day, 90-day, and one-year mortality and improves five-year overall and disease-free survival.

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