Research Paper

Volume : 5 | Issue : 6 | June 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

# Stage Migration after $D_2$ Gastrectomy for Gastric Cancer

Medical Science

**KEYWORDS :** Gastric cancer, D1 lymphadenectomy, D2 lymphadenectomy

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## ABSTRACT

*Introduction : Radical surgery with lymphadenectomy is the main stay of treatment in gastric cancer. The aim of this study is to evaluate stage migration after D2 lymphadenectomy by simulating D1 lymphadenectomy in resected gastrectomy specimens for distal gastric cancer.*

*Materials and Methods : All patients who underwent D2 lymphadenectomy for distal gastric cancer between January 2014 to December 2014 performed by a single surgeon were included in the study. D2 lymph nodes were dissected at the end of the surgery from the resected specimen. D1 lymph nodes were sent with the main specimen.*

*Results: Stage migration according to AJCC Gastric cancer staging 7th edition was observed in 8 out of 29 patients.*

*Conclusion: In our series, D2 lymphadenectomy improved staging of patients with gastric cancer. It improves lymph nodal yield and decreases incomplete resections.*

## INTRODUCTION

Radical surgery is the main stay of treatment in gastric cancer. The role and extent of lymphadenectomy has been debated in many studies. The aim of this study is to evaluate stage migration after D2 lymphadenectomy by simulating D1 lymphadenectomy in resected gastrectomy specimens for distal gastric cancer.

MATERIALS AND METHODS : All patients who underwent D2 lymphadenectomy for distal gastric cancer between January 2014 to December 2014 performed by a single surgeon . D2 lymph nodes were dissected at the end of the surgery from the resected specimen. D1 lymph nodes were sent with the main specimen. D1 gastrectomy is defined as dissection of all the Group 1 nodes, and D2 is defined as dissection of all the Group 1 and Group 2 nodes. Staging was done according to AJCC Gastric cancer staging & $7^{th}$ edition.

## RESULTS

Stage migration was observed in 8 out of 29 patients(27.58 %). After D2 lymph nodal dissection , two patients with Stage IIA had III B. Out of three patients with IIB, one had IIIA,IIIB,IIIC respectively.Two patients with IIIA upstaged to IIIB and one patient with stage III B migrated to IIIC.

## DISCUSSION

Surgery is the main stay of treatment for gastric cancer. However, the extent of lymphadenectomy is debated. A recent study concluded that D2 lymphadenectomy can be performed without increased risk of morbidity and mortality and is associated with improved survival in early stages[1].

Lavy R et al compared the pathological and short-term results following radical D2 and D1 lymphadenectomy after gastrectomy. They found significant differences and improved harvest of lymphnodes in D2 group compared to D1 group. They recommended D2 resection as standard approach for treatment of gastric cancer[2]. A meta-analysis of 1599 patients from four randomized control trials showed comparable surgical outcomes in short-term for both D1 and D2 lymphadenectomy. Sub group analysis showed survival benefit for T3 primary tumours and advanced nodal disease. In an analysis of 109 consecutive patients from 1999 to 2008, Mrena J et al examined the quality of surgical care and long- term outcomes after D2 gastrectomy and concluded that D2 dissection is a safe surgical option[4].

Italian Gastric Cancer trial group reported that the rate of complications after D2 dissection is much lower than in western trials. In their trial, the morbidity after D2 and D1 dissections was 17.9 and 12.0 percent respectively[5]. They found no difference was found in overall 5-year survival between D1 and D2 resection[6]. Dutch Gastric Cancer Trial analyzed the quality assurance of lymph node dissection and reported non- compliance rates as 80.5 percent and 81.6 percent in D1 and D2 groups respectively[7]. The results of MRC trial suggested that D2 gastric resections are associated with higher morbidity and mortality than D1 resections. The excess morbidity and mortality in this study were in patients who underwent additional resection of pancreas or spleen[8].

## CONCLUSION

In our series, D2 lymphadenectomy improved staging of patients with gastric cancer. It improved lymph nodal yield and decreased incomplete resections.

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