EVALUATION OF THE OPERATION OUTCOMES OF NON-SMALL CELL LUNG CANCER STAGE I - IIIA IN HANOI MEDICAL UNIVERSITY HOSPITAL

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SUMMARY

Objectives: To evaluate the operation outcomes of stage I - IIIA non-small cell lung cancer patients in Hanoi Medical University Hospital. Subjects and methods: The retrospective descriptive study of 30 non-small cell lung cancer patients staged I to IIIA. Results: Lobectomy was 96.7%, lung excision was only 3.3%. The average of operating time was 3.4 ± 0.8 hours. The blood loss during operation was 200 ± 25 mL. Postoperative complications: 6.6% (3.3% surgical bleeding, 3.3% subcutaneous emphysema). The average hospitalization length was 8 ± 1.5 days. The duration of postoperative analgesia was 7 ± 1.5 days. The disease free survival rates at 12, 24, 36 months: 86%, 76%, 66%. The overall survival at 12, 24, 36 months: 100%, 93%, 86.6%. Conclusion: Surgery for non-small cell lung cancer stage I - IIIA in the Oncology and Palliative Care Department, Hanoi Medical University Hospital had a good surgical and oncological results.

** Keywords: Non-small cell lung cancer; Stage I - IIIA; Surgical outcome.*

INTRODUCTION

Lung cancer is the most common cancer in men and is the leading cause of death in cancer patient. Lung cancer has a poor prognosis because of rapid progression, early metastasis and late diagnosis. Therefore, the indication of surgery is very limited. However, in recent years, the rapid development of diagnostic techniques has helped to detect the disease at earlier stages, so that the patients can be good candidates for surgery.

Surgery for lung cancer at the Department of Oncology and Palliative Care of Hanoi Medical University Hospital has been done since 2009. The primiliary results are promising. However, these results must be accurately and scientifically assessed by a strict study. Therefore, we conducted this research: *Evaluation of the operation outcome of non-small cell lung cancer staged I - IIIA in Hanoi Medical University Hospital.*

SUBJECTS AND METHODS

1. Subjects.

** Inclusion criteria:*

- Pathologically diagnosed as non-small cell lung cancer.

- Staged as IA, IB, IIA, IIB and IIIA according to UICC and AJCC (2010) classification.

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- Performed surgery with or without other combined treatments.

- Medical report contains sufficient and accurate information.

- No other cancer.

** Exclusion criteria:* not suitable for inclusion criteria.

2. Methods.

- The retrospective, descriptive study.

- The procedure is as follows:

Evaluation of early results of surgery for non-small cell lung cancer:

+ Surgical method.

+ Time for operation.

+ Blood loss during operation.

+ Common surgical complications such as: Length of post-operative hospitalization; duration of post-operative analgesia.

- Evaluate the oncological outcome: Disease free survival (DFS) and overall survival (OS).

** Data processing:* Data was processed by software SPSS 20.0.

RESULTS AND DISCUSSION

In our study, the incidence of lobectomy was 96.7%. The rate of bi-lobectomy was 3.3%. There was no case of pneumonectomy.

Table 1: Operative time and the amount of blood loss.

	Minimum	Maximum	Average
Operative time (hours)	2.8	4.2	3.4 ± 0.8
Blood loss during operation (mL)	150	250	200 ± 25

Our results were similar to that reported by other authors [3, 4, 5, 6]. Sutoro reported: his operative time for lung cancer in 2010 was 2.4 hours [4]. Operative time in study by Whitson was 3.5 hours [5]. Shiraishi also lost an average of 3.5 hours per lung operation.

** Surgical complications:*

Post-operative bleeding: 1 patient (3.3%). Arcording to Sutoro [6], open surgery had 10 post-operative bleeding patients accounted for 1.5% [4]. The postoperative bleeding rate of Whitson's study [4] was 4% (24 patients) [5]. In our study, 1 patient (Le Quang K - 21th number) had post-operative bleeding on the first postoperative day. After examination, we detected bleeding from the incision. Patient was stitched again. The following days, the patient was stable and was discharged on the 10th day.

Subcutaneous emphysema: 1 patient (3.3%). Nguyen Hoa Binh's study on 92 patients also included 2 cases of prolonged pneumothorax. In our study, none of the patients had prolonged pneumothorax. Probably, we had experience in stitching closure of the windpipe remaining. Only 1 patient showed subcutaneous emphysema on the second postoperative day. The level of gas was mild and self-healing after 5 days.

** Length of hospitalization:*

Length of post-operative hospitalization: the shortest: 7 days, the longest: 12 days, average: 8 ± 1.5 days. Our study also found that the post-operative hospitalization did not exceed 12 days, the shortest time was comparable to other studies in our country [1, 4].

** Duration of post-operative analgesia:*

The shortest: 5 days, the longest: 10 days; average: 7 ± 1.5 days.

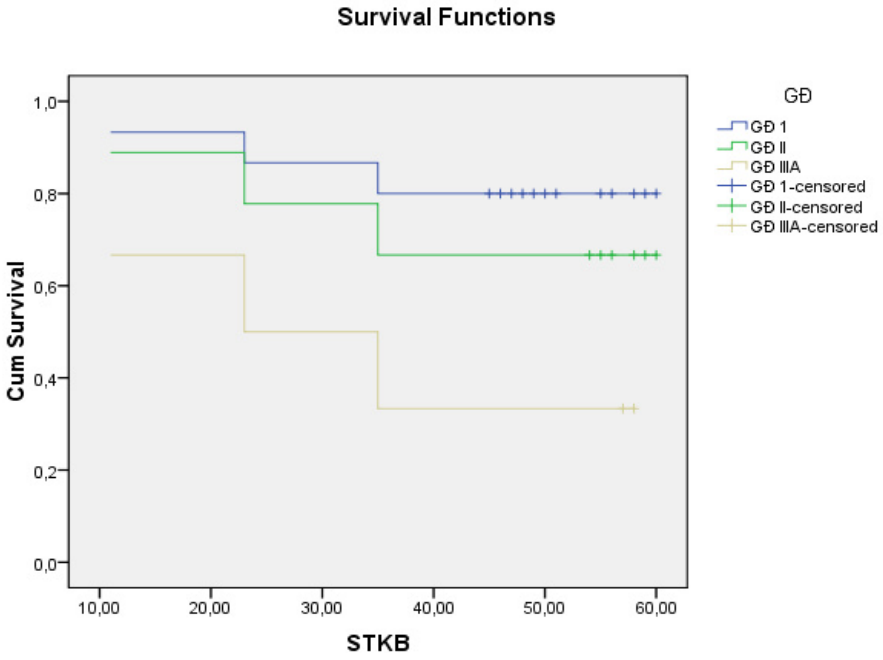

Figure 1: DFS.

The rate of DFS were 86%, 76%, 66% at 12, 24, 36 months, respectively. When stratified by stage, the rate of DFS at 12, 24, 36 months in stage I group was 93%, 86%, 80%, in stage II group were 88%, 77%, 73% and in stage IIIA group were only 71%, 50%, 33%, respectively. Our results were comparable to those of other authors in Vietnam and foreign country [1, 2, 4].

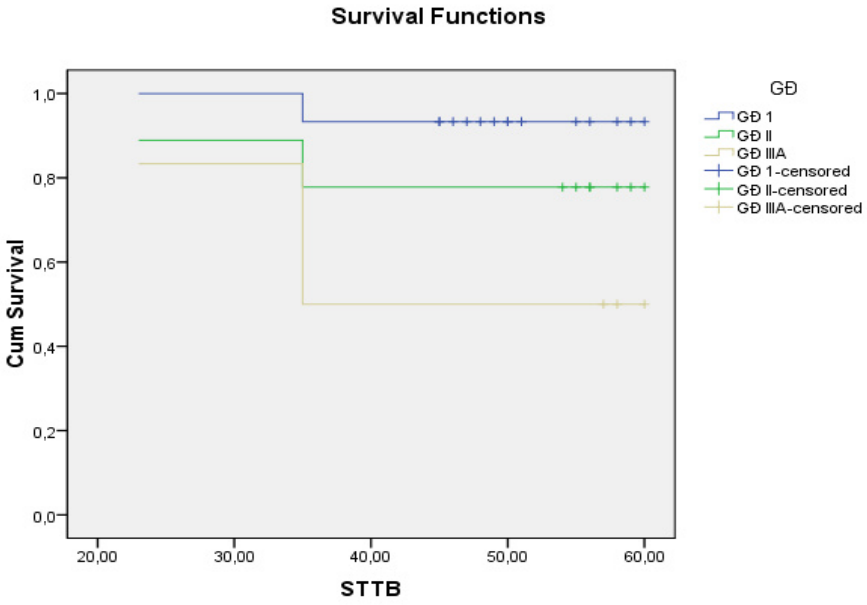

Figure 2: OS.

The rate of OS at 12, 24, 36 months of all stages were: 100%, 93%, 86.6%. Stratified by stage, this rate in stage I, II and IIIA groups were 100%, 100%, 93%, 100%, 88%, 77% and 100%, 83%, 50%, respectively. Compared to other studies in Vietnam and foreign countries, our OS rate was similar. Nguyen Khac Kiem's study recorded OS rates at 12, 24, 36 months were, 89%, 73%, 67%, respectively, mean survival was 27.19 ± 9.5 months (the shortest was 1 month and the longest was 43 months) [2].

According to Zhou QH's study (2006), the results of surgery for 248 patients with lung cancer, recorded that rate of 1-year OS was 78.6%, 3-year OS was 60.5%, 5-year OS was 32.7%, 10-year OS was 20.9%. The OS rate of Zhou's study was inferior than of ours because many his patients were in later stage [7]

Fukinos et al (2011) studied 216 patients and found that in the lobectomy group, 5-year OS was 55.6% whereas in the bilobectomy and pneumonectomy group, this rate was 27.7% [8].

CONCLUSIONS

Surgery for non-small cell lung cancer stage I - III A in the in the Oncology and Palliative Care Department, Hanoi Medical University Hospital had promising surgical and oncological results.

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