Natural History of Primary High-risk Gastrointestinal Stromal Tumor After Surgery in THAI Patients

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Background: To evaluate the recurrence of primary high-risk gastrointestinal stromal tumor (GIST) after surgery in THAI patients and to determine the prognosis factors.

Method: Clinicopathological data of patients with diagnosis of primary high-risk GIST after surgery at our institute during 2000 to 2012 were retrospectively reviewed. Risk factors determine recurrence and survival were analyzed.

Results: Fifty-eight cases of high-risk GIST were included in the analysis. Median recurrence-free survival (RFS) was 30.6 months (95%CI, 2.6-58.5). One-year RFS, 3-year RFS, and 5-year RFS were 76%, 47%, and 38%, respectively. Exactly half of the patients (29 of 58) had recurrence with 76% (22 of 29) occurred within two years after complete surgical resection. Median overall survival (OS) has not been reached, although, 1-year OS, 3-year OS, and 5-year OS were 98%, 91%, and 85%, respectively. At the cutoff date of the study, 82.8% (48 of 59) of patients were still alive. Median follow-up time was 47.8 months (range, 4.4-161.3). Higher mitotic count (>10/50 high-power fields) had significantly increased odds ratio (OR) for recurrence in the univariate analysis, OR=10.8 (95%CI, 1.8-65.5, p=0.035), and also in the multivariate analysis, OR=8.3 (95%CI, 1.3-51.3, p=0.024). Other risk factors, including greater tumor size, small intestine primary, rupture and positive margin were all only had non-significant trends toward higher risk of recurrence.

Conclusion: Although surgery is the mainstay treatment of primary localized GIST, substantial amount of patients in high-risk group experienced recurrence. Adjuvant imatinib should be considered standard practice in Thailand if there is any further strong evidence from cost-effective study in the future.