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Gastrointestinal Stromal Tumors: Recurrence and Survival Analysis of 49 Patients

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ABSTRACT

Background:

Gastrointestinal stromal tumors are the most common mesenchymal tumor originating from the gastrointestinal tract and have a broad spectrum of clinicopathological features affecting disease management regarding the treatment modalities.

Methods:

A retrospective study of 49 patients who underwent surgery for gastrointestinal tumors between 2008 and 2016 was conducted. Clinical, pathological, and immunohistochemical features of patients with and without recurrence were statistically analyzed.

Results:

Twenty-nine (59.1%) patients had gastric; 16 (32.6%) had small intestinal; 3 (6.1%) had mesenteric; and 1 (2.2%) had rectal gastrointestinal stromal tumors. Microscopic tumor necrosis and tumor ulceration were also significant for disease recurrence (P=0.005, P=0.049). High-risk patients according to Miettinen's Risk Classification were more likely to develop a recurrence (P<0.001). Additionally, high-grade tumors were also a risk factor for recurrence (P<0.001). Ki-67 levels were available in 40 patients and the mean Ki-67 level was 16.8 in patients with recurrence, which was a significant risk factor in regression analysis (HR:1.24, 95%, CI:1.08-1-43). Five-year disease-free survival rates of non-gastric and gastric gastrointestinal stromal tumors were 62.3% and 90%, respectively (P=0.044).

Conclusions:

Larger tumors and higher mitotic rates are more likely to develop recurrence. High Ki-67 levels were also associated with recurrence.