

CANCER GASTRO- INTESTINAL

Adjuvant chemo radiotherapy after gastrectomy and D2 lymphadenectomy in patients with gastric cancer in the National Institute of Cancer, Lima, Peru. Article in Spanish.

[Montenegro P](#), [Flores L](#), [Quintana S](#), [Casanova L](#), [Ruíz E](#), [León J](#), [Mantilla R](#).
[Rev Gastroenterol Peru](#). 2013 Jan-Mar;33(1):34-8.

Abstract

Adjuvant chemo radiotherapy is the standard treatment in Western countries in gastric cancer patients submitted to curative resection. INT0116 pivotal trial established adjuvant chemo radiation as the standard care for resected high risk adenocarcinoma of the stomach in US however was hampered by suboptimal surgery. There is controversial data about efficacy of this adjuvant therapy in patients who have undergone D2 lymphadenectomy predominantly. In our hospital D2 lymphadenectomy is standard surgery for gastric cancer.

To prove that chemo and radio therapy post gastrectomy and D2 linphadenectomy in patients' with gastric cancer is effective.

Retrospective study with gastric adenocarcinoma patients stage II to IV M0 who underwent curative resection at INEN (Instituto Nacional de Enfermedades Neoplasicas) Lima-Peru between 2001 and 2006. Standard treatment at institution is D2 lymphadenectomy. Chemo radiotherapy according to INT0116 was given like adjuvant therapy. Survivalcurves were calculated according to Kaplan-Meier method and compared with log-rank test.

84 patients were included 60.7% male and 39.3% female. Mean age was 49.5 years old. The pathologic stages were T1-T2 (15.5%), T3- T4 (84.5%), N0-N1 (10.7%), N2-N3 (89.3%). D2 lymphadenectomy was performed in all patients. The 3-year DFS was 17% and 3-year overall survival was 23.9%. However when we analyzed by subgroups the overall survival, was in group N1 (66.7%) and in group N2 (58.9%) and N3 (18.3%) and 3 years DFS by subgroups were N1 (100%), N2 (51.9%) and N3 (16.3%).

Adjuvant chemo radiotherapy decreased risk of death and relapse to three years mainly in patients with node positive N1-N2, who underwent curative resection with D2 lymphadenectomy, but recurrence was most frequent in N3 node positive, maybe is necessary improve the chemotherapy in this group of patients for decrease the rate of relapse.

Clinically important molecular features of Peruvian colorectal tumours: high prevalence of DNA mismatch repair deficiency and low incidence of KRAS mutations.

Egoavil CM, Montenegro P, Soto JL, Casanova L, Sanchez-Lihon J, Castillejo MI, Martinez-Canto A, Perez-Carbonell L, Castillejo A, Guarinos C, Barbera VM, Jover R, Paya A, Alenda C. Pathology. 2011 Apr;43(3):228-33.

Abstract

The incidence of colorectal cancer (CRC) in Peru has been increasing, and no data have been published on the molecular features. We explored the most relevant genetic events involved in colorectal carcinogenesis, with clinical implications.

Using immunohistochemistry for mismatch-repair (MMR) proteins (MLH1, MSH2, MSH6, and PMS2) and microsatellite instability analysis, we evaluated the status of 90 non-selected CRC Peruvian patients followed in a nationwide reference hospital for cancer (INEN, Lima). Tumours with loss of hMLH1 were evaluated further for hMLH1 promoter hypermethylation and all cases were evaluated for the presence of KRAS and BRAF-V600E mutations.

MMR deficiency was found in 35 (38.8%) patients. We identified an unexpected association between MMR deficiency and older age. Among the 14 cases with loss of MLH1, 10 samples exhibited hypermethylation. Of the 90 cases evaluated, 15 (16.7%) carried KRAS mutations; we found one previously unreported mutation (G13R).

Peruvian CRC tumours exhibited the highest prevalence of MMR deficiency reported to date. The expected hereditary component was also high. The age of onset of these MMR deficient tumours was greater than that observed for non-MMR deficient cases, suggesting the ineffectiveness of the Bethesda criteria for Lynch syndrome screening in Peru. Prospective studies are warranted to define the molecular characteristics of CRC in this population.

Rev Gastroenterol Peru. 2010 Oct-Dec;30(4):305-23.

[Survival factors in 152 patients with gastrointestinal stromal tumors].

[Article in Spanish]

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Abstract

The gastrointestinal stromal tumor (GIST) is the designation for a specific type of mesenchymal tumor of the digestive tract that is origin in the interstitial cells of Cajal (ICC) or its precursor multipotentials, its presentation is rare and therefore its best knowledge must affect a proper diagnosis and treatment.

To evaluate the clinical characteristics and to identify factors influencing survival of patients with gastrointestinal stromal tumor.

This study design is quantitative, non experimental, descriptive, retrospective and transversal. The study has been performed in 152 patients with gastrointestinal stromal tumor who were treated at the National Institute of Neoplastic Diseases (INEN), Lima, Peru, from January 1999 through December 2009. For the final diagnosis was registered the outcome of the surgical and histology was complemented by immunohistochemical test. To assess the normal distribution of the population was used the Shapiro-Wolk, Anderson-Darling, Lilliefors, regarding the use of inferential statistical tables for survival and to assess its significance in the univariate analysis ($p < 0.05$ significance), was used the Wilcoxon test, Tarone-Ware Log-rank and also to evaluate the difference between groups in contingency tables used the chi square and Fisher's test. Multivariate analysis was performed using the proportional hazards model of Cox.

The group of 152 patients included 78 women (51%) and 74 men (49%) with age range from 16 to 92 years, with an average age of 54. The frequency presentation was increased from the fourth decade of life and reaches its highest expression between 50 and 70. The initial presentation was with localized disease to 79 patients (52%) and primary metastases in 73 patients (48%), with an average time of disease 14 months. The prevalence of GIST tumor in the different organs was as follows: stomach with 77 patients (50.65%), jejunum with 21 patients (13.82%), retroperitoneum with 17 patients (11.18%), duodenum 11 patients (7.24%), colon 11 patients (7.24%), ileum 8 patients (5.26%), pancreas, 3 patients (1.97%), rectum, 3 patients (1.97%) and esophagus with 1 patient (0.66%). The most common symptoms of GIST tumors in general were gastrointestinal bleeding, abdominal tumor and abdominal pain. There are organ-specific symptoms such as jaundice in pancreas, dysphagia in esophagus and obstruction in the ileum. The tumor size greater than 10 centimeters was found in 92 patients (60.51%), 39 patients had size between 5 and 10 centimeters (25.65%) and 20 patients had lesions smaller than 5 centimeters (13.15%). Immunohistochemistry tests performed in 75 patients show that for all locations, the expression of KIT (CD117) is 94.8%, followed by CD34 to 70.35%; on the other hand, actin (61.68%) and S-100 (57.56%) have a smaller range of expression. Retroperitoneal GIST tumors had an expression of CD117 of 92.86% and CD34 of 60%, and GIST tumors of the pancreas had an expression of CD117 of 100% and CD34 of 100%. We evaluated 27 patients with low mitotic index, of which 10 had primary metastases (37%), in turn, of 25 patients with high mitotic index, 8 had primary metastases (32%). Of the 152 patients, 93 had complete resection of the disease, 28 had partial resection, 24 were unresectable and 07 did not undergo surgery, the more aggressive behavior was observed in ileum, 03 patients were unresectable, 02 patients had partial resection and only 02 could be completely resected, the rest of the series in general, for each location, the GIST tumors completely resected outscored the unresectable and partially resected. Of 93 patients that had completely resected, recurrence was found in 32 of these patients (34.4%), recurrence was local in 8 patients, metastases in 18 patients and local recurrence + metastases in 6 patients, with an average time of recurrence 22 months. The overall cumulative survival at 5 years was 81.35%. The survival of patients under and over 50 expressed a $p = 0.08$, cumulative survival rates by tumor size expressed $p = 0.56$, cumulative survival rates for stomach and intestinal location shows a $p = 0.056$. The 5-year survival of completely resected patients was 87.70%. Overall survival of patients with and without metastasis expressed $p = 0.001$, the cumulative survival function completely resected patients, the resected and partially resected, expresses with $p < 0.0001$. Multivariate

analysis showed that the most significant factor for disease progression was the primary metastases with $p = 0.007$, and that survival was directly related to complete resection of the disease which is expressed with $p < 0.0001$.

The most important prognostic factor of survival for gastrointestinal stromal tumors (GIST) is the complete resection of the disease. The factor that is associated with progression of the disease is the presence of metastases. In our series of 152 patients, tumor locations tend to relate better survival in gastric GIST than in intestinal GIST. Similarly, we found a tendency to express a lower survival in patients younger than 50 years. Differentiated tumor size in three size categories expressed no more related to survival. The low mitotic index associated with metastasis, not reflected a good prognosis of disease.