

Dr. R.M. Kasliwal Award
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ABERRANT CRYPT FOCUS AND FHIT PROTEIN

ABSTRACT

Aberrant crypt focus (ACF) was characterized in adjoining mucosa in sporadic colorectal carcinoma (CRC) and fragile histidine triad (Fhit) and Ki67 proteins were evaluated in 75 CRCs into hyperplastic (HACF) and dysplastic ACF (DACF). Fhit and Ki67 expressions were studied in ACF, carcinoma (Ca) and normal mucosa and grouped according to staining intensity and percentage of positive cells. Patient age ranged from 40- 86 in males and 45 to 70 years in females. All had HACF as non-contiguous foci, DACF in 24 (32%). Fhit intensity: strong - 40, 25 and 43% in HACF, DACF and Ca; gradational loss was observed in HACF, DACF and Ca, negative in 16% of Ca with significant difference between HACF and DACF ($p < 0.05$). Ca in older showed stronger Fhit ($p = 0.036$). Vegetarian and non-smokers had stronger intensity. Advanced stage tumor, non-vegetarian and younger age associated with loss of Fhit. Ki67- extended crypt pattern in HACF; DACF- extended neck pattern and surface epithelium. Ca showed high Ki67 ($p < 0.05$). Fhit protein had inverse association with Ki67. **Conclusion:** Weaker Fhit intensity associated with smoking, non-vegetarian diet and higher Ki67. Loss of Fhit protein is possibly influenced by environmental factors like smoking and non-vegetarian diet.