classifications were significant. Conclusion: Although further investigation is necessary for establishment of our computer-aided diagnosis system, our results suggest that quantitative analysis of NBI magnifying colonoscopy images based on Bag-of-Features may be useful for predicting the histology of colorectal tumors.

Values per Hiroshima classification

Values per histologic classification
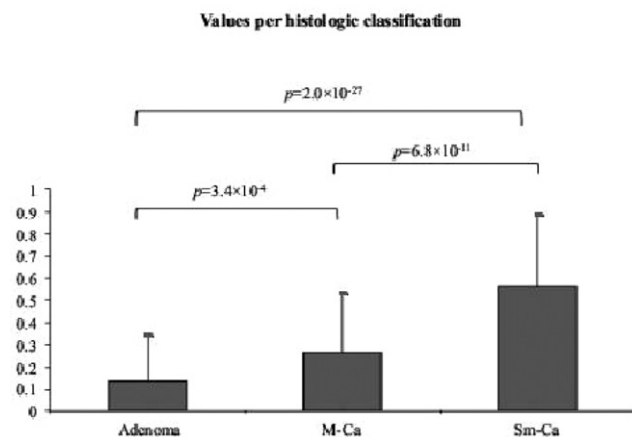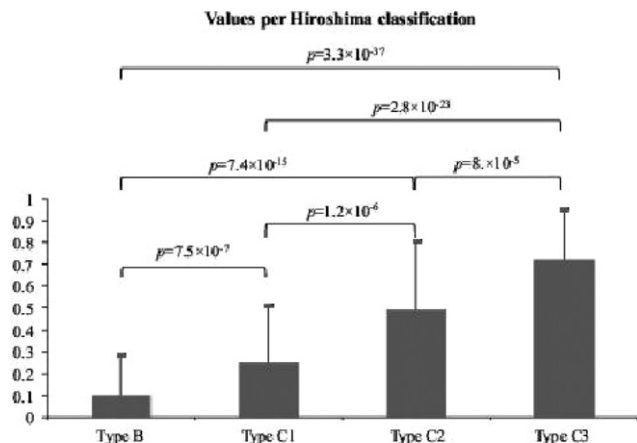
Mo1643

Diagnostic Characteristics of Depressed-Type Colorectal Cancers With Magnifying Endoscopy and Endocytoscopy

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Introduction: Colorectal cancers are generally recognized to develop from protruded-type "polyps". This "adenoma-carcinoma sequence" theory has been in the mainstream of development of cancers in colorectum for a long time. But recently the existence of many depressed-type cancers, which are considered to emerge directly from normal epithelium, not through the adenoma stage have been revealed. According to Kudo's pit pattern classification, it is now available to estimate the histology with high accuracy. And endocytoscopy (EC), which uses an ultra-high magnifying system, can contribute to the observation of not only the structural atypia but also the cellular atypia in living colorectal lesions. Aims: The aim is to clarify diagnostic features of depressed-type colorectal cancers in comparison with flat- and protruded- type lesions, demonstrating the validity of EC classification together with pit pattern diagnosis. Methods: A total

of 17291 colorectal carcinomas excluding advanced cancers have been observed by magnifying chromoendoscopy and resected endoscopically or surgically in our center from April 2001 to March 2012. Of these, 758 submucosal invasive colorectal carcinomas were included and 579 lesions were observed and classified into 5 groups according to EC classification using the integrated-type endocytoscope. We investigated morphological/development classification (modified Paris classification), pit pattern and EC classification of these lesions. And we evaluated correlations size and the rate of submucosal(SM) invasion and the rate of lymph nodal metastasis. Results: The rate of SM invasion in depressed-type lesions reached to 61.8% (157/254), meanwhile that in flat- and protruded- type lesions was 3.6% (234/6525) and 3.4% (357/10478) respectively. Within under 5mm in diameter, that was 10.7%, 0.00% and 0.02% respectively. And within under 10mm in diameter, the rate of lymph nodal metastasis was 13.0%, 0.00%, 3.12% respectively. Most (90.7% and 88.5%) of the protruded- and flat- type lesions showed type IIIL or IV pit patterns corresponding to adenomas, whereas 94.2% of the depressed- type lesions were characterized by type IIIs, VI or VN pit pattern corresponding to carcinomas. As for endocytoscopy, the flat- and protruded-type lesions showed various EC images. In contrast, the depressed-type lesions presented with EC3a(16/63;30.2%) and EC3b(36/63;67.9%) corresponding to invasive SM cancers. Conclusion: This study revealed the diagnostic characteristic of depressed-type lesions with high malignant potential. Those lesions tend to invade the submucosal layer and to metastasize even when they are small in size. It suggests that they follow a growth "De Novo pathway" different from the "adenoma-carcinoma sequence." Therefore it is important to give a careful consideration to the development and progression of colorectal cancers.

Mo1644

Can Desmoplastic Reaction Be Indicated In Vivo by Endocytoscopy?

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Background: In magnifying diagnosis during colonoscopy, the detection of desmoplastic reaction(DR) on the superficial layer is useful for predicting massively submucosal invasion in colorectal cancer. Although endocytoscopy can evaluate living cells and obtain pathological images in vivo, there is no data concerning the endocytoscopic image of DR. Aims: The aim is to clarify the feature of endocytoscopic image of DR on the superficial layer in the colorectum. Methods: From Apr. 2005 to Jun. 2011, a total of 13221 colorectal neoplasms, excluding advanced cancers, were resected endoscopically or surgically at our center. Using magnifying endoscopy and endocytoscopy, 453 lesions were observed and diagnosed according to Kudo's pit pattern classification and EC classification. Of these lesions, 53 lesions showed EC3b (defined as unclear gland formation and agglomeration of distorted nuclei strongly stained with methylene blue) by endoctyoscopy. We divided these lesions into two groups: DR positive (DR+) group and DR negative (DR-) group, and investigated the distinctive feature of endocytoscopic image of DR. Results: Of these 53 lesions showing EC3b, 22 lesions were included in DR+ group and 31 lesions in DR- group. In endocytoscopic image, 'fine granular structure' was found in 15(28.3%) of 53 lesions. There were significant difference in the observation rate of fine granular structure between DR+ group and DR- group (15/22(68.2%) vs 0/31(0%): p<0.01). The sensitivity and specificity that the presence of fine granular structure predicted DR on the superficial layer was 68% and 100% respectively. And other features of endocytoscopic image had not significant difference. Conclusions: Fine granular structure of endocytoscopic image have possibility to relate with DR on the superficial layer. Detection of DR by endocytoscopy would be useful for the diagnosis and treatment of colorectal cancers.

Mo1645

High-Resolution Microendoscopy (HRME) in the Detection of Anal Intraepithelial Neoplasia: Assessment of Accuracy and Interobserver Variability

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Background/Aims: While anal cancer is a relatively rare malignancy, its incidence