

A935: rectum: Tubulovillous adenomas

General facts of tubulovillous adenomas

Etiology

- The dysplasia-adenoma-carcinoma sequence occurs in the setting of increasing loss of heterozygosity in genes involved in: DNA replication accuracy(mismatch repair)-Chromosomes 2 and 3; tumor suppression-Chromosomes 5,18, and 17; and oncogene activation-chromosomes 5,17,and 18
- A hereditary predisposition to cancer is found in 1% of colorectal carcinoma patients with the Adenoma Polyposis Coli Syndrome involving Chr.5, and in 5-10% of patients with Hereditary Non-Polyposis(Lynch Syndromes) gene changes on Chr 2 and 3
- For each patient loss of heterogosity must occur in multiple genes

Pathogenesis

- Two pathways are commonly hypothesized to account for the known environmental, dietary and genetic predispositions to colorectal carcinoma. Both eventuate in loss of gene heterozygosity
- The first of these postulate mucosal damage either through dietary induction of increased bile acid production or the direct affect of dietary and environmental carcinogens. This leads to increased mucosal cellular proliferative activity and an increase risk for gene match failure
- The second postulates a direct genotoxic affect possibly mediated through production of oxygen free radicals
- As increased numbers of defective gene growth regulators are formed, increased abnormal cellular activity eventuates in carcinoma

Epidemiology

- Tubulovillous adenomas have the same epidemiology as colorectal carcinoma but occur at an earlier age
- General Gross Description

- Tubulovillous adenomas are polyps and may be pedunculated or have a broad base
- They are generally not as sessile as true villous adenomas
- Their surface may have a fissured appearance similar to tubular adenomas, or they may appear more granular
- The surface is red brown and benignancy can not be predicted from their gross appearance

Clinical Correlation

- Tubulovillous polyps are defined as adenomatous polyps with a villous component of 25-50%
- Their epithelium is identical to other adenomatous polyps, and the diagnosis is purely a pattern diagnosis

References

Robbins Pathologic Basis of Disease 5th ed, Cotran, RS, et al, WB Saunders Philadelphia 1994 p814

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Lot. No : 120213020621

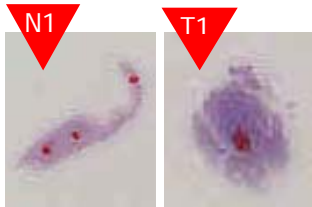


Fig 1. Scanned images for H&E stained slides.

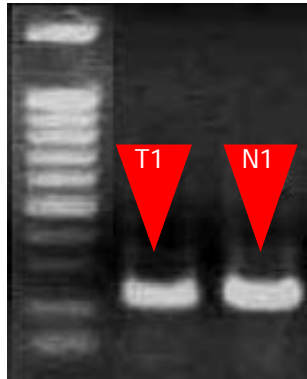


Fig2. RT-PCR for GAP3DH
Sample : Serial 10 sections of

	T1	N1
RNA conc. (ng/ul)	268.84	217.26
260/280	1.98	1.97

Pathology or other information:

AGE: 30
Sex: Female
Stage: pTis (stage 0)

Pathology:

1. Rectum, colectomy:

Tubulovillous adenomas with

- 1) low to high grade dysplasia.
- 2) resection margins, proximal and distal: Free of tumor.
- 3) lymph nodes, regional (0/19): Free of tumor.

* Comments: with tubulovillous adenoma with low to high grade dysplasia