Epithelial Gastric Polyps

Case of a 43 year old female with vague abdominal symptoms. A fundus gastric biopsy was done with an endoscopy report of polyp.

The histology of the biopsy revealed changes consistent with a diagnosis of Fundic Gland type polyp.

Epithelial Gastric Polyps

1 - 4% of gastric biopsies have gastric polyps as a diagnosis. Epithelial gastric polyps are sessile or pedunculated lesions that originate in the gastric epithelium. Of the gastric epithelial polyps those associated with gastritis (Hyperplastic Polyp) and those associated with proton pump inhibitors (PPI) (Fundic Gland Polyp) are the more frequent.

TIP

- About 20% of gastric biopsy samples identified as polyp endoscopically show no polyp.
- Evaluation of nearby “normal” gastric mucosa provide information to help correlate with the type of polyp.
Types of surface Epithelial Polyps:

1. **Fundic Gland type polyp.**
   - 13 – 77 % of gastric polyps.
   - Located mainly at fundus and upper body.
   - Associated with PPI use.
   - Rare association with H. Pylori.
   - Dysplasia rare, when present may be associated with familial polyposis (FAP).
   - Size generally less than 1 cm.

2. **Hyperplastic polyp.**
   - 18 – 70% of gastric polyps.
   - Located mainly at antrum, lesser curvature and prepylorus.
   - Associated with atrophic gastritis and intestinal metaplasia.
   - 25 % associated with H. Pylori.
   - Dysplastic changes are rare.
   - Size is generally less than 1 cm.

3. **Adenomatous polyp.**
   - 0.5 – 3.75 % of gastric polyps.
   - Located mainly incisura angularis, antrum, and less frequently in the fundus.
   - Associated with atrophic gastritis and intestinal metaplasia.
   - Rare association with H. Pylori. Dysplasia is intrinsic, may coexists with carcinoma.
   - Variable size.

4. **Hammartomatous polyps less common types.**
   - Juvenile Polyp.
   - Peutz -Jegher syndrome polyp.
   - Cowden's syndrome.

![Image of Adenomatous polyp with intrinsic dysplastic changes.](image)
Molecular Pathology

Currently immunohistochemistry is the preferred method for gastric polyps in clinical surgical pathology.

All adenomatous polyps (they have the highest malignant potential), hyperplastic polyps and any polyp associated with dysplastic changes should be evaluated immunohistochemically.

The more commonly used markers are:

- **P-53**
- **Ki-67**
- **Beta Catenin.**
- **COX-2**
- **APC (Adenomatous Polyposis Coli).**

**P-53** and **Ki-67** *(nuclear staining)* increase correlates with the degree of dysplasia. Seen in 60% of cases.

**Beta Catenin** *(nuclear accumulation)* increase correlates with the degree of dysplasia and is being proposed as a poor prognosis marker. Seen in 40% of cases.

**COX-2** dissregulation seen on 60% of cases.

**APC** gene mutation seen in 50% of cases.

**TIP**

- Endoscopic surveillance is indicated for patients with polyposis syndromes, adenomatous polyps and any patient with polyps with dysplastic changes.