

## Pyloric Gland Adenoma of Gallbladder: A Review of Diagnosis and Management

Farid Saei Hamedani

Fellow of Gastrointestinal and Hepatobiliary Pathology, Jackson Memorial Hospital, Miami, FL, USA

Email- farid.saei@gmail.com

### Abstract

**Introduction:** Neoplastic polyps of the gallbladder are commonly asymptomatic. However, advances in radiologic modalities and their growing use for various clinical indications have increased the number of gallbladder polyps being diagnosed and reported. Yet, due to lack of unified terminology and reporting criteria, the body of scientific evidence regarding their classification and management is scarce and even sometimes controversial. The plethora of terminology used in scientific literature to describe these lesions includes “pyloric gland adenoma,” “tubulopapillary adenoma,” and “biliary adenoma”. Even though this diverse group of lesions shares histological and immunohistochemical characteristics, they are distinct entities with different cellular lineages and a spectrum of dysplasia which makes their prognosis different. Histologically, these lesions are classified as the gastric pyloric gland, gastric foveolar, intestinal, and biliary, with the pyloric subtype being the most common lesion (82%). Adsay et al. are the first group of investigators who proposed the unified terminology of intracholecystic papillary-tubular neoplasms (ICPNs) to describe neoplastic polyps of the gallbladder. They used the size of over 1 cm as an inclusion criterion as this size has been used in other lesions of the pancreatobiliary system like intraductal papillary mucinous neoplasms (IPMN). In the surgical literature, patients with polyps of over 1 cm are often being elected to go through cholecystectomies. Adsay and colleagues used 25% and 75% tubule or papillary formation as cutoff points to categorize ICPNs based on their growth patterns, and so 43% of their cohort qualified as papillary, 26% as tubular, and 31% as tubulopapillary. The mean sizes of the papillary, tubulopapillary, and tubular polyps were reported as 2.8 cm, 2.7 cm, and 2 cm, respectively. It is explainable, as in other parts of the gastrointestinal tract, smaller lesions are usually more tubular and papillary lesions are often larger.

**Background:** They reported the biliary type as the most common (50%) and pyloric gland subtype (simple mucinous and complex-nonmucinous) in 20% of the cases, with only one of the simple mucinous polyps showing high-grade dysplasia. The least frequent subtype was intestinal, representing 8% of the cases. There was a significant difference in the risk of invasion among the subtypes, with the biliary subtype showing a stronger association with invasive carcinoma compared to the pyloric gland subtype. In the following, pyloric gland subtype, the most frequently encountered in the clinical

practice, is discussed in detail.

**Method:-** Pyloric gland adenomas are soft-tan excrescences which have a thin stalk that is readily detached from the surface. If the prosector is not aware of a possible polyp, the detached lesion could be mistaken as biliary sludge or debris mixed with the thick luminal contents and sampled in the second round of gross evaluation by searching the specimen container. Pyloric gland adenomas are characterized by packed, small, round, and uniform pyloric glands. They have a tubular configuration and low nuclear-cytoplasmic ratio with little or no intervening stroma. Adsay et al. have introduced a distinct subgroup within the pyloric gland adenomas called complex nonmucinous. They are highlighted by a complex growth of small tubular units that diffusely express pyloric gland immunomarker, MUC6. These showed a more irregular, variegated, and cystically dilated glandular units. The nuclear-cytoplasmic ratio is frequently higher than the simple group, and nucleoli are often evident. The overall survival after diagnosis of ICPN is high. Patients with ICPNs not associated with invasive adenocarcinomas, regardless of the subtype, had a 1-, 3-, and 5-year survival rates of 90%, 90%, and 78%, respectively, in Adsay and coworkers' study [3]. Among ICPNs, pyloric gland subtype had the best prognosis as it showed the lowest risk of associated invasive carcinoma

**Results:** Most of the gallbladder polyps are asymptomatic unless they are large, multiple, or detached from the mucosa which results in free-floating fragments that can cause biliary colic. Thus, most of the polyps are diagnosed during imaging procedures performed for other reasons. One of the well-established predictors of malignancy and a surgical management criterion in gallbladder polyps is the size of over 10 mm. Conversely, some have proposed the higher cutoff value of 15 mm for surgical interventions. Many authorities recommend noninvasive management for the polyps smaller than 10 mm even though reports of malignancy in smaller-sized polyps exist as well. Overall, the accepted criteria for cholecystectomy in asymptomatic patients with polyps include older than 50 years old, polyps of over 10 mm, concurrent gallstones, or continuous growth of the polyp in the follow-up imaging studies.

*Extended Abstract*

**Biography:** Farid Saei Hamedani is working as a Fellow of Gastrointestinal and Hepatobiliary Pathology, Jackson Memorial Hospital, Miami, FL, USA

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