COWden Syndrome: A Rare Spotting

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Introduction

- Cowden Syndrome (CS) is a rare autosomal dominant disorder characterized by multiple hamartomas in any organ throughout the body.
- Patients with CS are at an increased risk of developing breast, thyroid, and endometrial cancer.
- Although there are some reports of ganglioneuroma polyps in patients with Cowden Syndrome, there have only been a few reported cases of ganglioneuromas in the duodenum since 1957.
- Gastrointestinal ganglioneuromas are rare, well-differentiated benign tumors of the enteric nervous system composed of mature ganglion cell nerve fibers predominantly found in the colon.
- In this case report, we describe a unique case of a diffuse ganglioneuromas found in the duodenum of a patient with a PTEN mutation and established diagnosis of Cowden Syndrome.

Case Presentation

- A 40-year-old man was referred via open access to our endoscopy unit for index upper endoscopy and colonoscopy in the setting of a recent diagnosis of Cowden syndrome based on PTEN mutation.
- On exam, he had frontal macrocephaly and hyper-extendable joints.
- Labs revealed a normal BMP and PTEN gene mutation
- Colonoscopy revealed multiple small and large polyps and upper endoscopy showed numerous gastroduodenal polyps that were removed and polypoid appearing duodenal mucosa which was biopsied.
- Pathology of the duodenal mucosa confirmed ganglioneuroma via positive S100 stain.

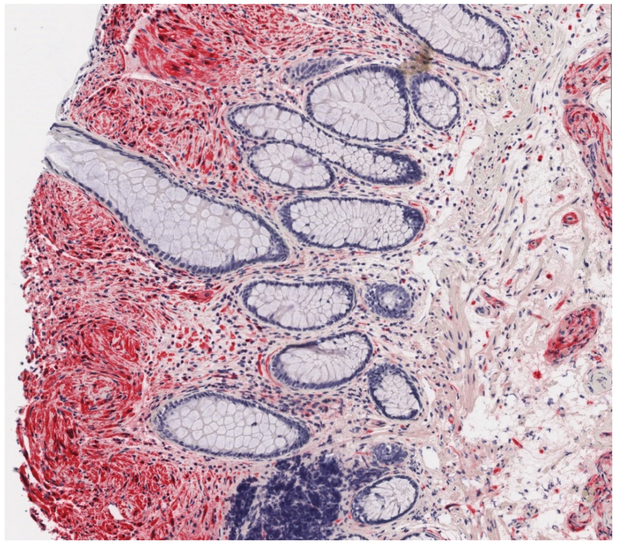

Image 1: Histological Slide: S-100 immunohistochemistry of the duodenal polyp showing expansion of the lamina propria with the presence of diffusely positively stained ganglioneuroma cells.

Discussion

- Cowden Syndrome is a subtype of PTEN hamartoma tumor syndrome in adults.
- Classic manifestations of CS include variable expression of dermatologic manifestations such as oral papilloma, trichilemmomas on the face, sclerotic fibromas of the skin (found in 90% of patients).
- GI involvement of CS may include asymptomatic hamartomas, lipomas, and adenoma polyps (found in 80% of patients).

Discussion Cont.

- Less commonly, GI ganglioneuromas have been found associated with CS.
- These can remain asymptomatic until they grow large enough to produce a mass effect. This can cause GI bleeding secondary to ulceration of the mucosa. Thus, when found, it is crucial these tumors are resected for excellent prognosis.
- The presence of a PTEN mutation which deletes or disrupts the protein product increases the risk of developing neuroendocrine tumors, as seen in our patient.
- Unlike previously reported cases of gastric and colonic ganglioneuromas in patients with CS, our patient presented asymptomatically with a ganglioneuroma found in his duodenum upon a routine endoscopy.
- Duodenal ganglioneuromas are very uncommon and there has been no previously reported association of them with CS.
- Limited data is available on the appropriate management and surveillance of duodenal ganglioneuromas.

Conclusion

- Physicians should be aware of the association of ganglioneuromas with Cowden Syndrome to detect its presence early enough to resect without complications.
- Although there are no current guidelines, we recommend endoscopists consider performing random duodenal biopsies for patients with established Cowden's syndrome.
- The discovery of intestinal ganglioneuromas should make clinicians consider PTEN testing.

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