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## The Peutz-Jeghers Syndrome. Case Reports.

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**Key Words:** polyps, Peutz-Jeghers syndrome.

**Abstract.** Two additional cases of Peutz-Jeghers syndrome are described. One of them, a 19 year-old female, is a sporadic case, whereas in the other case, also a 19 year-old female, there are two members of the family with the Peutz-Jeghers syndrome. A review of some salient features of this entity is made. These include clinical presentation, histopathological features, malignant potencial and treatment.

*Received: 29-04-91 • Accepted: 23-07-91*

### INTRODUCTION

The Peutz-Jeghers syndrome is an autosomal dominant disorder characterized by gastrointestinal polyps and mucocutaneous pigmentation (5). There are both a familial and sporadic form, which differ clinically merely in the family history (19). The syndrome was first described in 1921 by Peutz (16) and was recognized as a distinct entity by Jeghers in 1949 (10). Histologically, these polyps are hamartomas and are the result of overgrowth of the muscularis mucosae producing a

tree-like branching covered by normal mucosa (1,11). The polyposis is generalized, with the jejunum or ileum (or both) involved in nearly all patients, and duodenum less often (7). The melanin pigmentation is noted in infancy and early childhood. The lips are affected in 85 per cent of the reported cases (2). Less frequent sites are the extremities and areas around the other facial orifices (2). Over 500 patients with this syndrome have been described since 1921 (9). In view of the apparent rarity of this condition, two further cases are considered worth recording.

## CASE REPORTS

**Case No. 1.**- This female patient with pigmentation around the lips, was first seen in July 1988 when aged 19, with signs and symptoms of intestinal obstruction. A 60 cm segment of haemorrhagic, infarcted small bowel had to be resected. Three polyps were present at intervals throughout the small intestine (Fig. 1). The polyps were excised and enterotomies were closed in two layers transversely. A further polyp was felt 40 cm proximal to the small bowel obstruction and resected with an end-to-end anastomosis. The patient made an uneventful recovery and was discharged one week later. She has had no further symptoms. No other member of the family showed oral

pigmentation, and barium enema on her parents did not show polyps. Microscopic examination of all the polyps revealed benign hamartomas throughout (Fig. 2).

**Case No. 2.**- This patient is a 19 year-old woman who, from birth, had revealed pigmentation on her lips, face and oral mucosa (Fig. 3). Family history was significant for her mother with Peutz- Jeghers syndrome, and one brother who died of intestinal obstruction secondary to intussusception of an intestinal polyp. The patient was admitted elsewhere when aged 8 with signs and symptoms of intestinal obstruction. At surgery, intussusception of a jejunal polyp was found. Resection of the affected segment with an end-to-end anastomosis was carried out. The polyp was reported as a "benign adenomatous polyp". She made a satisfactory recovery and was dis-

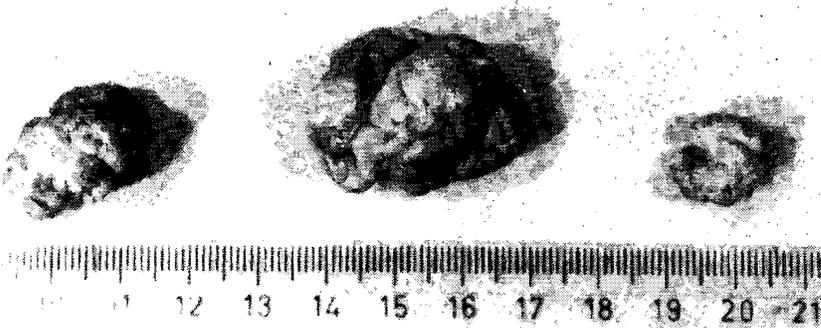


Fig. 1. Polyps excised from ileum.



Fig. 2. Peutz-Jeghers polyp of small bowel, showing extensive tree-like arborization of smooth muscle from the muscularis mucosae. Glands cystically distended by mucin extend through all layers of the bowel wall (HEX 3)

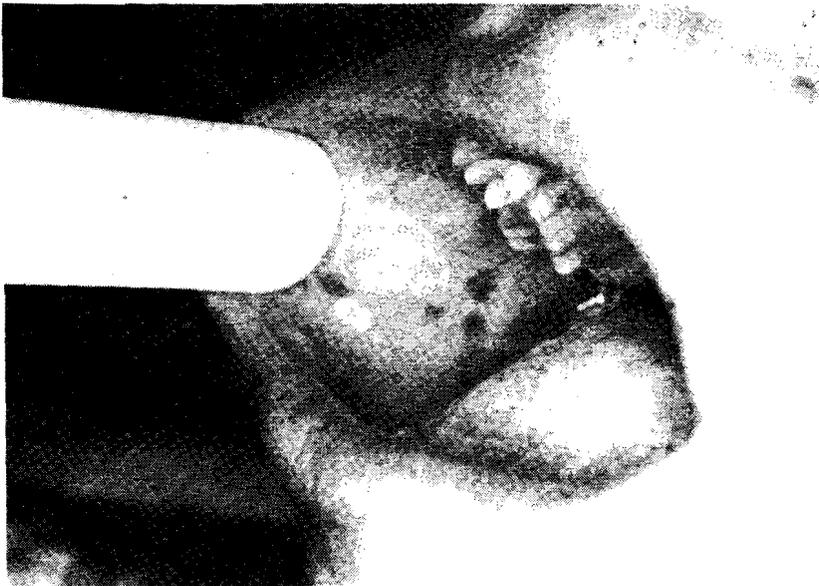


Fig. 3. Oral pigmentation.



Fig. 4. Roentgenogram showing multiple, tiny filling defect (arrowed) in duodenum consistent in diffuse polyposis.



Fig. 5. Barium enema showing three large polyps (arrowed) in ascending and descending portions of the colon.

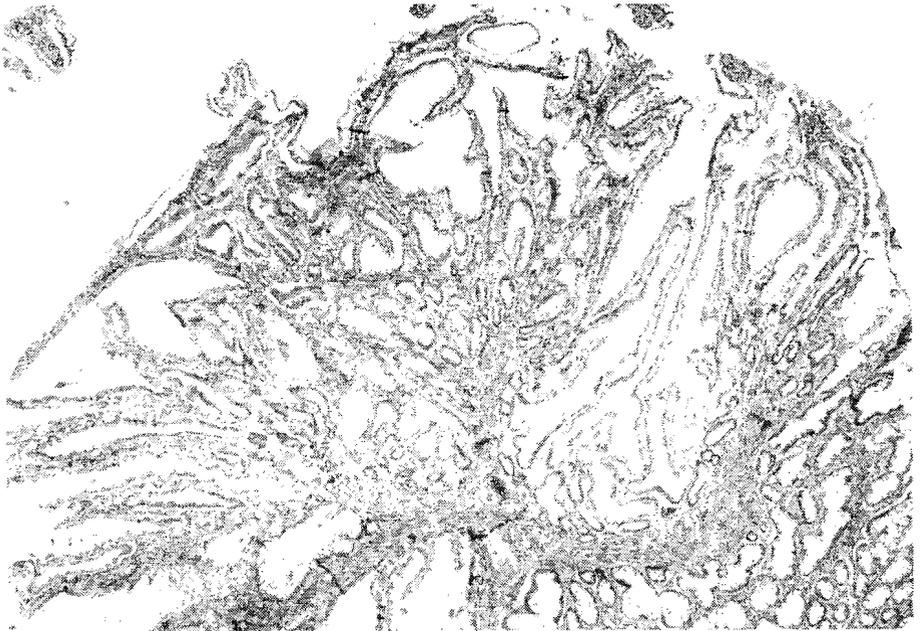


Fig. 6. The glands and accompanying lamina propria are separated into groups by smooth muscle fibers. The epithelium is not dysplastic (HE x 20).

charged from the hospital to be readmitted 7 months later with symptoms of acute intestinal obstruction. At laparotomy an ileoileal intussusception was seen. Resection with an end-to-end anastomosis was performed. The polyp was reported as a "benign adenomatous polyp". She was seen in our unit in January 1986, complaining of colicky abdominal pain. Roentgenologic examination (Fig. 4, 5) showed multiple polyps in the duodenum and colon. Several rectal and duodenal polyps were resected by endoscopy. The polyps were reported as hamartomas (Fig. 6). She still often suffers from mild and severe attacks of colic but so far has required no further admission to the hospital.

### DISCUSSION

The association of circumoral pigmentation with polyposis, though rare, is by now a well recognized entity. The syndrome is autosomal dominant, transmission being bound to the Y chromosome (17). The gastrointestinal polyps consist of hamartomatous lesions (2,8). These are the results of overgrowth of the muscularis mucosae producing tree-like branching covered by normal mucosa (13). The branches become thinner as they reach the periphery of the polyp. There is no excess of lamina propria as in the juvenile polyp (13). In contrast to adenoma, there is no increase in the mitotic activity (19).

The relationship of gastrointestinal carcinoma and the Peutz-

Jeghers syndrome has been discussed for many years. Early authors reported that approximately 20 per cent of the cases showed malignant changes within the polyps (1). The histologic picture with considerable epithelial mitotic activity and abnormal branching tree arrangement of smooth muscle bands, has been incorrectly interpreted as evidence of malignancy (1). The over-secretion of mucin trapped in the polyp which cause misplacement of epithelium may be misinterpreted as invasive carcinoma (12,18). Histological examination of these lesions shows that the hamartomatous malformation may extend through all layers of the bowel wall (Fig. 2). Mucosal glands within the muscularis propria may be misinterpreted as invasive carcinoma (12, 18), but, although there may be an increase in the mitotic activity, the epithelium is rarely dysplastic (Fig. 6). However, since 1957, there has been several reports of true intestinal carcinoma in patients with Peutz-Jeghers syndrome involving mostly the upper part of the gastrointestinal tract (3,4,11), but it is not clear whether carcinoma arises from the polyps or independently (14,19). In 1969, using a stricter definition of malignancy, Dozois et al (6) reviewed 326 cases of Peutz-Jeghers syndrome reported up to 1967 and found only 11 cases of gastrointestinal carcinoma, yielding a malignancy rate of 3 per cent. Recently, interesting associations have been demonstrated between Peutz-Jeghers syndrome and breast cancer, which is usually bilateral,

and also with sex cord tumours of the ovary and feminizing Sertoli cell tumours of the testis (13).

In genetic terms, the syndrome appears to be the result of linkage between mucocutaneous pigmentation and gastrointestinal hamartomatosis. The fact that the Peutz-Jeghers syndrome may occasionally be found in patients without pigmentation and that circumoral pigmentation may be seen in the absence of gastrointestinal hamartomas, suggest that the chromosomal loci for the two components of the syndrome, although close, are not inseparable (7).

A well documented family history and a careful physical examination are important to make the diagnosis (2,6,20). The typical pigmentation situated on the lips, face, digits and oral mucosa which appears in early childhood and gastrointestinal polyposis are the hallmarks. Recurrent attacks of severe colicky abdominal pain is the most frequent symptom and is present in 82 per cent of the patients (2).

The usual widespread distribution of the polyps render a curative prophylactic approach difficult (6). The treatment of the disease is limited mainly to treatment of complications: ileus intussusception and haemorrhage (6,7,20). Surgery should be limited, where feasible, to enterotomy and removal of the offending polyps. Meticulous intraoperative "top and tail" small and large bowel endoscopy has been proposed (15) as a means of prophylaxis against intestinal obstruction, but it is not curative, as

diminutive lesions will inevitable be missed and may then grow to significant size. Multiple resection, as an alternative, may lead to malabsorption states. Gastric and most duodenal polyps should be removed at upper gastrointestinal endoscopy. All polyps larger than 2 cm in diameter should be removed by local resection.

## RESUMEN

**Síndrome de Peutz-Jeghers. Reporte de dos casos.** Dorfman S. (Apartado postal 10317. Maracaibo-Venezuela), Talbot I.C., Cardozo J., Tjon M., Camacho S. *Invest Clin* 32(2): 59-66, 1991.

Se describen dos casos de pacientes con Síndrome de Peutz-Jeghers. El primer paciente una joven de 19 años de edad, se trata de un caso esporádico, mientras que el segundo paciente también de 19 años de edad, tiene una historia positiva de Síndrome de Peutz-Jeghers en dos miembros de su grupo familiar. Se realiza una revisión de los aspectos más resalantes de esta entidad nosológica, que incluye, presentación clínica, características histopatológicas, potencial de malignidad y tratamiento.

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