



Patient Report

**Doctors Peutz and Jeghers
And Their Patients**

A Report by
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Peutz-Jeghers syndrome is a genetic condition named after the two doctors who first described the combination of spots and polyps in different patients. I am interested in the people behind the spots and polyps, the doctors, but more importantly the patients and their family members. While reading any PJS articles, but most especially case reports, I try to imagine the circumstances of the people living with PJS. It is also important to me to realize how far we've come in the 52 years since the syndrome was fully described. It is my hope that conditions will continue to improve for all people with PJS and that our group can contribute to that improvement.

Dr. Peutz and his patients

In 1921 Dr. Peutz of Holland published an article titled, *Over een zeer merkwaardige, gecombineerde familiare polyposis van de slijmvliezen van den tractus intestinalis met die van de neuskeelholte en gepaard met eigenaardige pigmentaties van huid- en slijmvliezen*.¹ I can't interpret Dutch, but the words *familiare polyposis tractus intestinalis met pigmentaties* sound like familial polyposis of the intestinal tract with pigmentation. The 12-page article is difficult to decipher, but the photographs show a child's head, a bit of intestine with polyps and another child exposing his lower lip. The focus is a family: the patient is 15 years old and the ages of the other children are 4-25 years.

In 1950 van Wijk reported on the family in *Over het syndrome adenomatosa gastrointestinalis generalisata heredofamiliaris gecombineerd med huid-en slijmvliespigmentaties of ziekte Peutz* (thesis).² And in 1999 a third article on Dr. Peutz's family was published, *Peutz-Jeghers syndrome: 78-year follow-up of the original family* by Dr. Westerman et al. in **Lancet**.³ From this article it is possible to learn more about the six generation family. Twenty-two members of the family are affected with PJS, 31 are unaffected. There are 25 family members whose status is unknown because of lack of information or (in 3 cases) because the symptom-free individual has not yet reached the age of 25 years. If you are interested in meeting this family, it is possible to see both their family tree and tables detailing characteristics of the affected Peutz family members and distribution of characteristics of the affected individuals per generation.

Of the 22 affected family members, only 17 survived into adulthood with the mean age of death being 38 years as opposed to 69 years for the unaffected family members. Seven of the 22 (32%) affected family members died of cancer, five of which occurred in the GI tract. We've had much discussion on this list about Dr. Giardiello's article titled Very high risk of cancer in Familial Peutz-Jeghers syndrome.⁴ In it a 93% absolute risk rate for cancer in folks with PJS is given. This family hasn't proved those figures, but their rate of cancer is much higher than the 2-3% risk rate quoted in medical textbooks. Another interesting thing about this family is that six of the 22 affected members developed nasal polyps. In our group we've had very few reports of nasal polyps.

The final paragraph of this article reads:

"The natural course of PJS in the original Peutz kindred shows clearly that this is not a benign disease. Decreased survival was encountered in the affected individuals due to gastrointestinal complications, especially in the (untreated) earlier generations, and early development of malignancies. Identification of gene carriers at an early age and the development of suitable screening programmes will possibly reduce morbidity and mortality in PJS families."

Dr. Jeghers and his patients

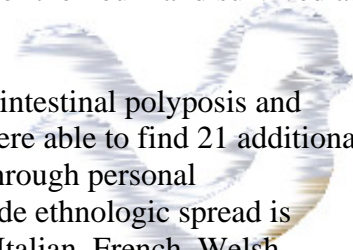
A photograph & biography of Dr. Harold Joseph Jeghers are available on-line.⁵

In 1939, Dr. Jeghers met his first PJS patient, a 14-year-old school girl. This child and another patient are mentioned by him in two paragraphs in his 1944 article, *Pigmentation of the Skin*.⁶ Dr. Jeghers describes a curious syndrome of pigmentation of the skin associated with intestinal polyposis and notes, "The possibility exists that the pigmentation represents an associated pigmentary anomaly rather than the result of a metabolic or nutritional disturbance of intestinal origin."

Ten years later, Dr. Jeghers, with Dr. McKusick and Dr. Katz, described a syndrome of diagnostic significance in the *New England Journal of Medicine*.⁷ In two articles they report the cases of 10 patients, review the literature, discuss the key features (pigmentation, intestinal polyposis and heredity) and summarize their findings. There is a tremendous amount of material in these 18 pages and I won't attempt to report on it all. Since I am interested in a patient's perspective, I will tell you something about the patients.

Of the 10 patients, three belonged to one family and three to another. Four patients appeared to have sporadic cases of PJS, since no other family members had associated spots or GI symptoms. Common complaints were GI pain, masses in belly, anemia, weakness, tarry stools, change in bowel habits, vomiting, borborygmi (growling belly), emaciation and loss of appetite. All patients exhibited spots on lips and mouth. Three of the patients died of treatment complications at the ages of 15, 39 and 9. Another patient, a 22-year-old woman, was diagnosed with an adenocarcinoma of the ileum and survived at least 8 years after its removal.

In their review of the literature, the authors describe cases of intestinal polyposis and pigmentation reported by others including Dr. Peutz. They were able to find 21 additional cases (proved, probable or possible) within the literature or through personal communication. In the discussion they mention, "A rather wide ethnologic spread is evidenced by its occurrence in persons of American, French-Italian, French, Welsh, Italian, Indo-European, Dutch and Negro family background." A long discussion of the characteristics of the pigmentation and GI symptoms follow. I won't try to summarize,



but will mention the spots were found, in order of frequency, on mouth, lips, rectal area, fingers, face and toes. The most exceptional thing about the polyps is that they tend to occur in the small intestine (rare in the general population and almost universal in folks with PJS).

In the section on heredity, the authors conclude that the syndrome is dominant (50% risk of each child inheriting it), has a high degree of penetrance (the syndrome manifests in those who inherit the PJS gene), doesn't skip generations and that polyps and spots usually occur together in the same person. They note that there may be variable expression, "It might be subsequently demonstrated that in the same family some members show only polyposis, and some only spots."

Three members of one of Dr. Peutz's families were followed up 49 years later by Doctors Foley, McGarrity and Abt in a 1988 article titled *Peutz-Jeghers syndrome: a clinicopathologic survey of the 'Harrisburg family' with a 49-year follow-up*.⁸ The abstract reads,

"Of the original Peutz-Jeghers families reported by Jeghers, the 'Harrisburg Family' has now been followed for 49 yr. Their 12 affected family members comprise the largest Peutz-Jeghers kindred reported. The course of this family illustrates that Peutz-Jeghers syndrome is not a benign disease. One family member developed a duodenal carcinoma in a hamartoma with adenomatous changes; this progression in the duodenum has not previously been reported. Ten patients underwent 75 polypectomies. One patient developed short bowel syndrome. Three patients died in young adulthood. The development of gastrointestinal malignancy in 2 of 12 affected patients suggests that Peutz-Jeghers syndrome may be a premalignant condition. Consequently, even asymptomatic gastric, duodenal, and colonic polyps should be removed endoscopically. If surgical intervention is necessary, intraoperative endoscopy with polypectomy may prevent the development of a short bowel syndrome. Colonoscopic screening of patients and their family members may be beneficial and surveillance for extraintestinal malignancy appears to be warranted."

To find out more, you may want to read a more recent article by Dr. McGarrity et al. titled *Peutz-Jeghers Syndrome*.⁹ It includes an illustration of the 9-year-old twin girls from London who were reported to have pigmentation and anemia. One twin died at the age of 20 of intussusception, the other at the age of 52 of breast cancer. These daughters of the London rat catcher may be our earliest forebears. As always, it is important to see the people behind the syndrome, whether they are doctors or patients. I am aware that descendants of the original families may belong to our PJS online support group. I apologize if I have uncovered old wounds or misrepresented your family in any way.

¹Peutz, J. L. A.: *Very remarkable case of familial polyposis of mucous membrane of intestinal tract and nasopharynx accompanied by peculiar pigmentations of skin and mucous membrane.* (Dutch). *Nederl. Maandschr. Geneesk.* 10: 134-146, 1921.

²van Wijk, ThW: *Over het syndrome adenomatosa gastrointestinalis generalisata heredofamiliaris gecombineerd med huid-en slijmvliespigmentaties of ziekte Peutz* (thesis) Leiden, Netherlands (1950)

³Westerman, A. M.; Entius, M. M.; de Baar, E.; Boor, P. P. C.; Koole, R.; van Velthuysen, M. L. F.; Offerhaus, G. J. A.; Lindhout, D.; de Rooij, F. W. M.; Wilson, J. H. P. : *Peutz-Jeghers syndrome: 78-year follow-up of the original family.* *Lancet* 353: 1211-1215, 1999.
PubMed ID : [10217080](#)

⁴Giardiello, Francis M: *Very High Risk of Cancer in Familial Peutz-Jeghers Syndrome.* *Gastroenterology* 2000; 119:1447-1453.
PMID: [11113065](#)

⁵*Harold Joseph Jeghers: A Student for Life* <http://www.jeghers.com/aboutjeghers.asp>

⁶Jeghers, H.: *Pigmentation of the Skin.* *New Eng. J. Med.* 231: 122-136, 1944.

⁷Jeghers, H.; McKusick, V. A.; Katz, K. H. : *Generalized intestinal polyposis and melanin spots of the oral mucosa, lips and digits.* *New Eng. J. Med.* 241: 993-1005 and 1031-1036, 1949.

⁸Foley, T. R.; McGarrity, T. J.; Abt, A. B. : *Peutz-Jeghers syndrome: a clinicopathologic survey of the 'Harrisburg family' with a 49-year follow-up.* *Gastroenterology* 95: 1535-1540, 1988.
PubMed ID : [3181678](#)

⁹McGarrity TJ, Kulin HE, Zaino RJ. *Peutz-Jeghers syndrome.* *Am J Gastroenterol* 2000 Mar;95(3):596-604 Department of Medicine, The Milton S. Hershey Medical Center, The Pennsylvania State University College of Medicine, Hershey 17033-0850, USA.
PMID: [10710046](#)

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