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## Observations on the Neglect of Anal Skin Tags as an Early Marker of Crohn's Disease in Children



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### Background and Aims

Anorectal skin tags (ASTs) are a common, asymptomatic, early manifestation of Crohn's disease (CD). Usually CD has its onset in childhood (age 18 or younger). This paper aims to identify patients with Crohn's disease and ASTs, to determine the age of onset of CD, and then estimate the years that ASTs had been present before establishing the diagnosis of CD.

### Methods

From our database of over 3000 patients with inflammatory bowel disease, we identified 263 Crohn's disease patients with obvious ASTs at first visit for CD, and 57 (21.6%) of these were in patients diagnosed with CD at age 18 or younger.

### Results

In this group of 57 children, the median age at diagnosis of CD was 14 and the median number of years from the first awareness of ASTs was 6.

### Conclusions

The high incidence of ASTs should encourage pediatricians, internists, family physicians and gastroenterologists to spread the buttocks and search for ASTs in children presenting with diarrhea, rectal bleeding, abdominal pain or growth failure. Accordingly, the diagnosis of CD might be made so much earlier and effective medical therapy be initiated sooner.

## INTRODUCTION

Relatively little attention has been paid to the anal skin tags (ASTs) of Crohn's disease (CD).<sup>1,2</sup> Since ASTs are painless and often overlooked in favor of the more ominous perirectal manifestations such as abscesses and fistulae which require

more immediate attention,<sup>3,4</sup> their recognition has become progressively more meaningful as an early indicator of CD.<sup>5</sup> Examples of ASTs are shown in Figure 1.

In the course of management of inflammatory

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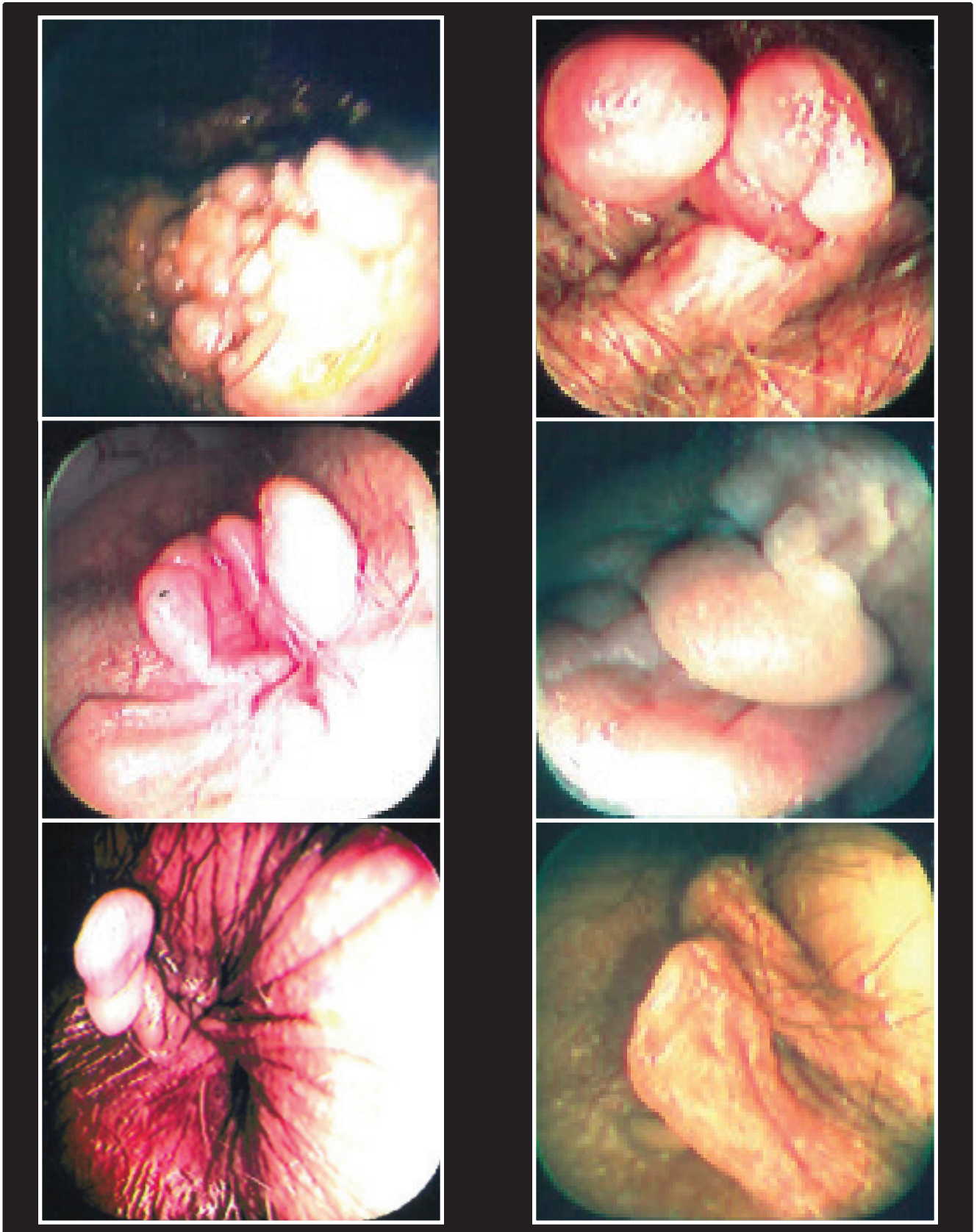


Figure 1. Characteristic Anal Skin Tags of Crohn's Disease

bowel disease (IBD) over the past 50 years, it has been the policy of the section of gastroenterology at Lenox Hill Hospital to search for ASTs at the time of the initial physical examination in patients with known or consideration of the diagnosis of CD. At the time of colonoscopy it has been the

**Table 1. Patients with Crohn's Disease and Anal Skin Tags**

Age Years	Age at First Visit with the ASTs # Patients	Age at CD Diagnosis # Patients
30 and over	5	108
24-29	14	48
23	2	6
22	2	6
21	3	18
20	4	11
19	4	9
206 total - age 19 and over		
18	3	3
17	5	8
16	3	5
15	3	7
14	2	11
13	2	6
12	2	4
11		4
10		3
9	2	
8		3
7		1
3	1	1
1		1
	Total = 57	57 (21.6%) total - age 18 or less
Total of all patients		263 (15.3%) ASTs at all ages

routine to spread the buttocks and take a picture of the ASTs if present. In our database of more than 3,000 IBD patients at Lenox Hill Hospital, we have recognized that ASTs are usually present in CD patients at the first visit, regardless of age, and are most commonly recognized during childhood or teenage years. We have gathered information on the history of ASTs, particularly their contribution to the earlier diagnosis of CD with the goal of preventing destruction of tissue and the need for surgery.

**Objective**

To determine the duration of anal skin tags prior to the diagnosis of Crohn's disease in children (age 18 or younger).

**Population**

We identified 263 (15.3%) of patients with ASTs at the time of the first consultation out of 1683 with Crohn's disease.

**Results**

In 57 of the 263 patients (21.6%) the CD was diagnosed at age 18 or younger (Table 1). The ASTs were identified after excluding them from other anal or perirectal abnormalities including hemorrhoids.

Statistical analyses were performed using R version 3.3. (R Foundation for Statistical Computing, Vienna, Austria). The age range at the time of the first visit with ASTs of the CD patients to the IBD service at Lenox Hill Hospital was 3-52 years with a median of 20 and the earlier age range at diagnosis of Crohn's disease was 1-18 years with a median of age 14 (Tables 1 & 2). In Figure 2 are histograms showing the distributions of both. In all 57 patients, the parent or the patient consistently claimed that the ASTs were already present at the earlier time of diagnosis. The number of years elapsed between Crohn's disease diagnosis and the time of consultation with ASTs ranged from 0 and 36 years with a median duration of 6 years (Table 2).

**DISCUSSION**

The characteristic features of ASTs have been reported earlier.<sup>1-4</sup> Those studies showed that the

*(continued on page 16)*

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ASTs were present more frequently when the colon alone was involved with CD (47%) than ileitis (37%) or ileocolitis (16%). The recognition of ASTs has served to herald the earlier diagnosis of CD in young patients with diarrhea, abdominal pain, and/or growth retardation. The larger ASTs have been called elephant ears; they are usually painless<sup>2</sup> except when associated with healed anal fissures or ulcers.

Most ASTs are identified coincident with other signs or symptoms of CD. Nevertheless, the ASTs may precede the intestinal symptoms by months or even years<sup>5-9</sup> and are independent of other perirectal or perianal manifestations.

Since ASTs are rarely symptomatic, they have mostly been ignored in favor of treating other symptoms of CD including more incapacitating abscesses and fistulas. Historically, physicians and surgeons have been cautioned to avoid surgical intervention of the ASTs for fear of failure of healing, incontinence or provoking underlying CD activity. Accordingly, excision and biopsy are infrequently done. Nevertheless, in one study skin tags were purposely excised and the pathology revealed granulomas in 9/26, and when granulomas were present they were more plentiful in the ASTs than in rectal biopsies.<sup>10</sup> Granulomas were seen in all sections of the AST tissue in 7/9 patients.

Table 2 shows that the median time between CD diagnosis and first gastroenterological consultation was 6 years. Since the ASTs were present at first visit and more likely present at the time of earlier CD diagnosis, the median time interval was 6 years.

Other observations from the current study include perirectal manifestations of Crohn's disease including abscesses, fistulae and strictures to be present along with the ASTs in 33/57 patients, and 41/57 had already had bowel resections at the time of the consultation.

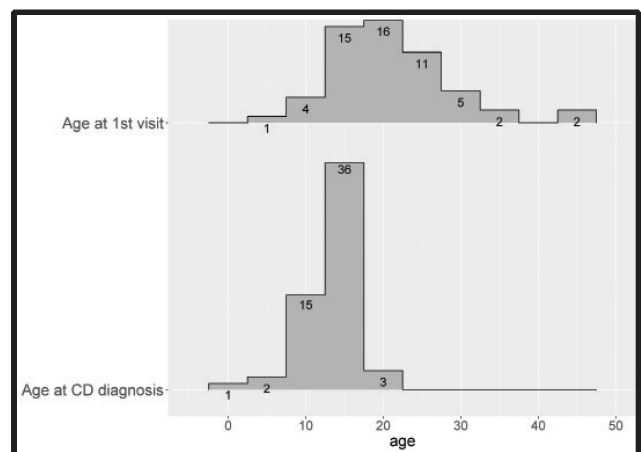
The issue about avoiding biopsy of ASTs as to avoid a flare of the CD is not well documented. A review of 135 patients (11 studies) which combine ASTs with hemorrhoids revealed a complication rate of 17% manifested by sepsis, fecal incontinence, anal ulceration or stenosis, but this study did not focus on the ASTs.<sup>11</sup>

Perirectal lesions may precede the onset of intestinal symptoms in 9.3% by 2 weeks - 12

**Table 2. Summary Statistics of 57 Children with CD and ASTs**

Age at First Visit with ASTs	Age at DX of CD	Years Between Recognizing ASTs and Diagnosis of CD
Years		
Min.:3.00	Min.: 1.00	0.000
1st Qu.: 16.00	1st Qu.: 12.00	2.000
Median: 20.00	Median:14.00	<b>6.000</b>
Mean: 21.35	Mean: 13.32	8.000
3rd Qu.:24.00	3rd Qu.:16.00	10.000
Max.:52.00	Max.:18.00	36.000

1<sup>st</sup> QU = First Quartile  
3<sup>rd</sup> QU =Third Quartile



**Figure 2. Distribution of age at CD diagnosis and age at 1st visit with ASTs. Frequencies are shown at the top of each bar.**

years.<sup>12</sup> In one study with a prevalence of ASTs in 25/37 (68%) new skin tags rarely appeared later following those found initially.<sup>13</sup> A study from South Korea calls attention to the high incidence of ASTs in the Pediatric CD population.<sup>14</sup>

In 1932 when Crohn, Ginzberg and Oppenheimer described Regional Ileitis there was no mention of any peri-rectal disease which is understandable

since the focus then was on the sickest patients who presented with surgical emergencies, resections and the resulting pathology;<sup>15</sup> subsequently, however, it became evident that ano-rectal lesions are common and may precede the intestinal symptoms. Yet after 85 years later, most reports on Crohn's disease ano-rectal manifestations emphasize the abscesses and fistulas; only studies which focus specifically on the anal skin tags serve to describe them in detail.

**CONCLUSION**

New efforts to target the preclinical phase of Crohn's disease<sup>16</sup> with a more determined search for an early marker of disease are warranted. The presence of ASTs, particularly in children with symptoms of abdominal pain, diarrhea or retarded growth should lead to earlier diagnosis, treatment and prevention of late complications which result in surgery and then recurrent disease. Earliest investigation after discovery of ASTs would certainly accelerate this effort. ■

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