



Clinical practice

Anal lesions presenting in a cohort of child gastroenterological examinations. Implications for sexual traumatic injuries

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ABSTRACT

The purpose of this study was to describe the anal lesions found in children during a pediatric gastroenterology consultation when the reason for the complaint was related to a digestive disease. This prospective descriptive study included 100 children under 15 years of age over a 13-month period, consulting due to digestive symptoms.

The children were under 8 years old (90%) and 25% were under 3.1 years old. Constipation was the most frequent reason for consultation (69%). Fifty-one anal lesions were observed, of which 58.8% were anal fissures, 15.7% were skin tags and 5.8% were venous congestions related to straining. Anal fissures and skin tags were located at the median line, according to the clock-face method in supine position. No child had more than two anal lesions. No anal dilatation, sphincter hypotonia, anal scars, anal lacerations or bruises were found.

The two most common anal lesions were anal fissures and skin tags. These anal lesions were mainly observed at the median line and were due to constipation. No cases of multiple anal lesions were found in terms of common digestive diseases.

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1. Introduction

Digestive disorders are a common reason for visiting the pediatric emergency room, making a scheduled pediatric consultation or for consulting a physician.^{1–7} Constipation accounts for around 5% of general pediatric consultations and 25% of consultations with pediatric gastroenterologists.⁷ Every year, diarrhea accounts for 138,000 consultations and 18,000 hospitalizations in France.⁴ Abdominal pain accounts for 20–30% of emergency pediatric consultations.⁸

All digestive diseases, whether acute or chronic, may be the cause of anal lesions.^{1,9–13} However, the presence of an anal lesion may also be the result of a sexual assault.¹⁴ In France in 2011, there were 5423 child victims of rape and 8047 child victims of sexual harassment or other forms of sexual assault.¹⁵

Differentiating pathophysiological anal lesions from those resulting from trauma is actually complex, because some anal lesions are common to both situations. As such, doctors need additional objective medical evidence based on a detailed description (type, location, specific features) of pathophysiological anal lesions.^{16,17} However, few studies have focused on non-abused children.

It is thus necessary to improve our knowledge of anal lesions that are non-traumatic in origin.^{11,18–22} We conducted a study with the objective of describing anal lesions seen in children who were not the victims of sexual assault who presented with a digestive disease.

2. Equipment and methods

2.1. Population

All the children consulting a hospital physician in pediatric gastroenterology from 3 January 2011 to 9 February 2012 were included in the study, i.e. 100 children. The criteria for inclusion

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Table 1
General characteristics of the population studied.

Variable	N	Mean \pm SD	Median	Min	Max
Age (years)	100	5.0 \pm 3.0	4.2	0.42	14.4
Weight (kg)	100	19.3 \pm 8.6	17.0	7.3	51.5
Height (cm)	100	106.5 \pm 19.9	103.5	66.0	161.0

were as follows: children had to be under 15 years of age and their reason for consulting had to be the result of digestive symptoms. The criteria for exclusion were as follows: children who had had surgery, children who had suffered physical trauma (accident in the home, road accident) and children who had been the victims of clearly-established abuse or sexual assault. To exclude sexual abuse, we checked authorities records and asked the parents. Because of ethical problem, we decided not interview children about this subject.

A single examiner was approached for this study. The children were examined in supine position. In forensic examination, lateral position and prone knee-chest position are used because it increases sensibility of examination; but we wanted to respect the normal course of the medical consultation. To visualize the anus, we used the “buttock separation method” and waited 30 s to observe if anal dilatation occurs. Sphincter tone was assessed with digital anal examination.

2.2. Study data

The data was collected during the consultation and then transferred to the end-of-consultation data collection form. The following data was collected: demographic data (inclusion number anonymized identity, date of birth, age, gender, weight, height, size and growth curve), data relating to the pediatric gastroenterology consultation (consultation date, reason for consultation and medical history that may be related to an anal disease), data on the anal examination (lesions observed, anal tone and description of the radial folds) and the topography of the lesions according to the clock-face method in supine position, the so-called “frog” medical examination position.¹⁸

The data collection form was constructed on the advice of a pediatric gastroenterologist so that it can be completed by the physician in a very short time (1 min) at the end of the consultation. Reports of consultations were reviewed in some cases, to clarify the reason for the consultation, the medical history, the location of anal lesions according the examination position, and the diagnostic findings that may explain the symptoms.

2.3. Statistical method

Statistical analysis was performed using STATA 10.1[®] software. The results were given in the form of percentages for quantitative variables and in the form of averages for qualitative variables, with the appropriate confidence intervals. Comparison of quantitative data was made using Fisher’s exact test. The alpha risk was 5%. The

Table 2
Functional complaints of digestive origin.

Functional complaints of digestive origin ^a	Number
Constipation	69
Rectal bleeding	16
Abdominal pain	11
Acute or chronic diarrhea	4
Pruritus	2
Total^a	102

^a At least one functional sign per subject, hence a total of more than 100.

Table 3
Description of anal lesions.

Anal lesions	Number
Anal fissures	30
Skin tags	8
Anal anteversion ^a	5
Venous congestion on straining	3
Streptococcal anusitis	3
Anal margin scar abscess	1
Anal mycosis	1
Total	51

^a Malformative rather than acquired disease.

relative risk was given by the Odds Ratio and by its confidence interval. Comparison of two averages was performed using a t-test. Comparison of more than two averages was performed using a variance analysis after checking the equality of variances.

3. Results

3.1. Population

48% of the population studied were girls and 90% of the children were under 8 years of age. (Table 1).

3.2. Reasons for consultation

Functional digestive complaints accounted for 96 consultations (Table 2). Two consultations dealt with the follow-up of a chronic digestive disease (allergy to cow’s milk protein and Peutz–Jeghers syndrome) and two others dealt with acute anal disease (streptococcal anusitis and anal margin abscess).

3.3. Description of anal lesions

Fifty-one anal lesions were observed. (Table 3).

Anal fissures accounted 58.8% of the lesions. Only one fissure was seen in 14 out of 24 children; a double fissure was observed in 6 children and a fissure associated with a skin tag was seen in 4 children. Out of 30 fissures, 29 were located at the median line (Table 4 – Figs. 1 and 2).

Skin tag accounted 15.7% of the lesions. Of the 7 children who had a skin tag, 2 presented with a single skin tag, 1 presented with two skin tags, and in the remaining 4 children, the skin tag was associated with an anal fissure. Six out of 8 of the skin tags were located at the median line (Table 5 – Figs. 1 and 3).

Concerning 3 children, a venous congestion was observed during defecation effort. But without defecation effort, the clinical examination was normal. (Fig. 4).

Three cases of proctitis were observed, of which two were of streptococcal origin, primarily in boys. These cases of proctitis were associated to fissured lesions, erosive skin lesions or a fissure in the intergluteal fold (Fig. 5).

Table 4
Location of anal fissures (supine position).

	Nombre
6 h	10
1 h	5
5 h	5
12 h (0 h)	4
7 h	3
11 h	2
8 h	1
Total	30

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