

Improving the classification of hemorrhoids: results of an Italian multicentric study on 1494 patients

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Abstract

The general classification of hemorrhoids presents some wide gaps, because of progress in coloproctology. The authors present their proposal for a new classification and refer to a national multicentric study made in collaboration with 19 centers, on a total of 1494 patients. A clinical comparative study between the two forms of classification is described. On the basis of their findings, the new classification presents a better diagnostic resolution in comparison with the old. The authors recommend the clinical applicability of the new classification. © 2000 Elsevier Science B.V. All rights reserved.

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1. Introduction

The introduction of Ambulatory Surgery (AS) and One Day Surgery (ODS) in proctology makes indispensable a critical review of the surgical options for hemorrhoids [1]. The routine use of local anesthesia allows ambulatory hemorrhoidectomy to be performed [2]. The established classification of hemorrhoids does not correctly define the fourth stage and the acute events of the disease and for these reasons it does not fit the evolution of proctology. The authors [3] propose a new classification for hemorrhoids and refer to a comparative study of the two classifications with the collaboration of 19 centers of coloproctology, on a total of 1494 patients. A mean of 78.6 reports (min 13, max 150) were received from these centers. Each report defined an individual patient's hemorrhoids using both the old classification and the new. All the data have been submitted to a statistical analysis in order to check the utility of the new classification and its eventual clinical applicability.

2. Method

The new classification is essentially based on the description of the precise number of nodules in the anal canal. Type 1 describes the presence of internal piles, while Types 2 and 3 correspond to a single or double prolapsed pile. Type 4 indicates more than two prolapsed piles or total circumferential hemorrhoidal prolapse. Acute events are also categorized as they represent distinct ways of clinical presentation. Type 5 is edema of a single pile, and Types 6 and 7 correspond to external hemorrhoidal thrombosis or massive thrombosis (Fig. 1). The authors have undertaken a clinical comparative study of the two methods of classification of hemorrhoids on a consecutive series of 1494 patients, 672 female (44.9%) and 822 male (55.1%). The average age was 48 (range 18–93) years. All the patients underwent proctological examination and were classified using both the old and the new classification systems. Proctological examination consisted of a general evaluation of the external anal canal and rectal examination. All the patients with other proctological pathologies or who had previously undergone proctological surgery were excluded from the study. At the end of the medical examination, each specialist completed a question-

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naire defining the patient's hemorrhoids both using the old and the new classification systems. According to the purpose of the study each classification provided the possibility of the outcome 'not classifiable'. Statistical analysis studied the similarity between the two systems throughout a cross-referenced double-input table. The McNemar test for dependent samples was used to test the above-described hypothesis.

3. Results

A descriptive analysis compared the distribution in the old classification (degree 1, 2, 3, and 4) with the new. The first degree of the old corresponded almost completely with Type 1 of the new classification in 88% of cases. The remaining 12% classified this degree in the range of acute events (6%) and in Types 2 and 3 of the new (6%) (Fig. 2). The second degree of the old was classified in 69% of cases Type 2 and 3, in 22% as Type 1, in 4% as acute events and in 5% as type 4 of the new classification. The third degree of the old classification corresponded in 77% of cases to Type 2 and 3, in 13% to Type 4, in 2% to Type 1 and in the remaining 8% to the acute events of the new classification (Figs. 3 and 4). The most important result was the distribution of the classification of the fourth degree: although 55% of the cases corresponded to Type 4 of the new (complete prolapsed hemorrhoids), in 28% of the cases it was

OLD CLASSIFICATION OF HEMORRHOIDS

- INTERNAL HEMORRHOIDS:

FIRST DEGREE: are cushions that do not descend below the dentate line on straining

SECOND DEGREE: are cushions that protrude below the dentate line on straining and can be seen at the exterior, only to disappear again immediately straining stops

THIRD DEGREE: are cushions that descend to the exterior on straining or defecation and remain outside until they are digitally replaced into the anal canal, where they remain until the next bowel movement or possibly the next act of straining

FOURTH DEGREE: internal cushions that are permanently outside the anal verge

- EXTERNAL HEMORRHOIDS

NEW CLASSIFICATION OF HEMORRHOIDS

TYPE:

- 1- INTERNAL PILE/S
- 2- SINGLE EXTERNAL PILE
- 3- DOUBLE EXTERNAL PILE
- 4- TRIPLE EXTERNAL PILE OR COMPLETE HEMORRHOIDAL PROLAPSE

ACUTE EVENTS

- 5- EDEMA SINGLE PILE
- 6- EXTERNAL HEMORRHOIDAL THROMBOSIS
- 7- MASSIVE HEMORRHOIDAL THROMBOSIS

Fig. 1. Proposal of the new classification of hemorrhoids.

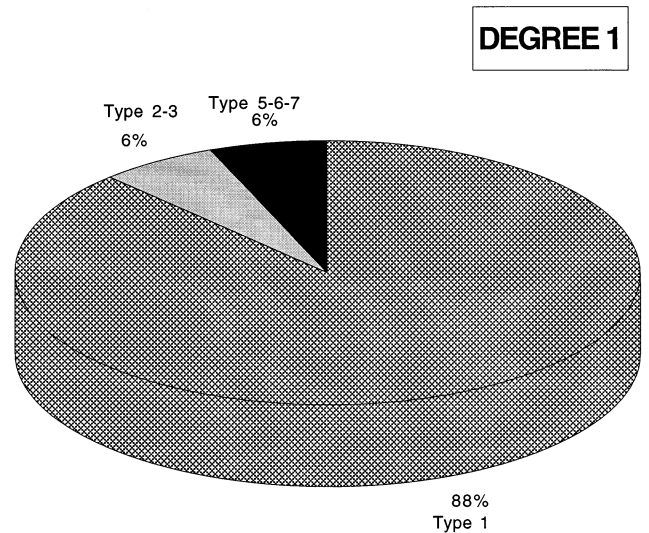


Fig. 2. Method of classification of the first degree in the new classification.

placed in Types 2 and 3 of the new and in the remaining 16% in the acute events, elements both introduced in our new classification (Fig. 5). Types 2 and 3 of the new classification (single and double nodule) therefore represented the way of classification for the second degree (69%), third degree (77%), and fourth degree (28%) of the previous classification. Type 4 of the new classification (complete prolapsed hemorrhoid) mainly corresponded to the fourth degree of the old classification (56%). The acute events introduced with the new classification (Type 5, 6, 7) draw from all groups of the old classification: first degree: 6%; second degree: 4%; third degree: 8%; fourth degree: 17%. This demonstrates that they represent an autonomous clinical entity. Nineteen patients were 'not classified' with the new classification (1.28%), while 49 (3.29%) with the old. The McNemar χ^2 test was applied and showed statistical significance. The new classification system shows a classification capacity three times superior to the old one.

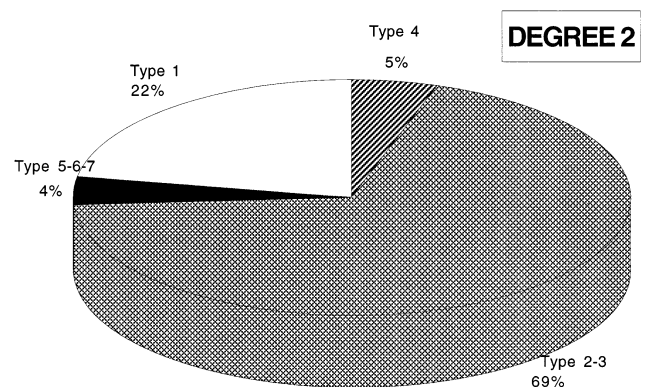


Fig. 3. Method of classification of the second degree in the new classification.

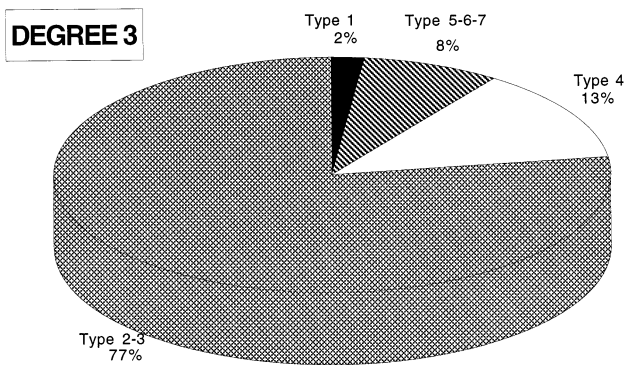


Fig. 4. Method of classification of the third degree in the new classification.

4. Discussion

The old classification of hemorrhoids does not fit the evolution of proctology in particular the introduction of local anesthesia and the development of AS and ODS. The incorrect definition of the fourth stage, the absence of the categorization of acute events and the inability to categorize suitable cases for AS and ODS, seem sufficient to propose a new classification based on the definition of the precise number of the nodes present in the anal canal with or without straining and on the definition of the acute stages of the illness. Martí [4] underlines that 60% of proctologic operations can be performed on an outpatient basis. He proposes a division of different pathologies in proctology according to the type of anesthesia. As far as hemorrhoids are concerned, he divides surgery for a single pile and for complete prolapsed hemorrhoids, because the two clinical situations need a different therapeutic approach. The results of our multicentric study seem to confirm the inefficiency of the old classification. The validity of the new classification has been studied introducing the parameter of inability to classify the patient with the two classifications. The statistical analysis conducted on the variable called 'unclassifiable' demonstrates a diagnostic usefulness three times greater with the new classification. The unclassifiable parameter is used 49 times with the old (3.29%) and only 19 (1.28%) with the new. For this reason the new classification has a major diagnostic impact in comparison with the old. The

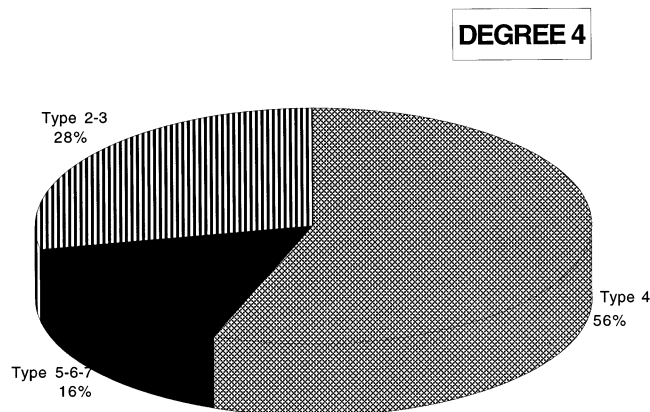


Fig. 5. Method of classification of the fourth degree in the new classification.

category of patients defined as unclassifiable in the old classification could be classified in 33% of cases as Types 2 and 3 and in 48% as Types 5, 6, 7 (acute events) in the new classification. The new classification seems to better define hemorrhoids, and in our opinion, it could form the basis of a much needed modern classification.

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