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Review Article

Two Trends in Modern Treatment of Anorectal Malformations

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Abstract

For 40 years, citing the decisions of the Krickenbeck classification, Peña and his followers blocked the publication of articles that contradicted Peña's experience, even though all of Peña's innovations had no scientific basis. Peña's false claims about the absence of an anal canal in anorectal malformations (ARMs), the insignificant role of the puborectalis muscle, and the significant role of the subcutaneous portion of the external anal sphincter served as a justification for posterior sagittal anorectoplasty (PSARP). Since 1982, most pediatric surgeons have used PSARP, which destroys the anal canal. The poor treatment outcomes were explained by the congenital absence of the anal canal and spinal pathology. Alberto Peña managed to convince practicing physicians that his experience, not the results of scientific research, solves all the problems of pediatric colorectal surgery. Massive propaganda has created a generation of pediatric surgeons ignorant of the anatomy and physiology of the anorectal area, both in normal and ARMs. Because of their belief in Peña's infallibility, pediatric surgeons ignore articles that irrefutably prove the presence of an anal canal, the preservation of which ensures normal continence and defecation. A review of the literature revealed two trends. (1) Some pediatric surgeons who recently promoted PSARP, understand its destructive nature and are moving to less traumatic procedures (2). Another, more widespread category of pediatric surgeons employs methods far from scientific to assert status quo that prevents scientific research to improve treatment for patients with ARMs.

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Keywords: Legacy of Alberto Peña; Anorectal malformations; Posterior sagittal anorectoplasty; Anal canal; Internal anal sphincter; Paradigm shift.

Introduction

In a previous study of Peña's contributions to the diagnosis and treatment of anorectal malformations (ARMs) [1], it was shown that: [1] Peña described, together with DeVries, the posterior sagittal approach (PSARP) for the pull-through procedure in 1982, without having published a single article before; [2] In order to justify the transection of the puborectalis muscle (PRM), which plays an important role in fecal continence, he claimed that since he had not seen this muscle during the operation, it cannot play such an important role as described by pediatric surgeons and physiologists; [3] In order to justify the transection of a large part of the external anal sphincter (EAS), he ignored the centuries-old describtion anatomy of the anorectum. As a result, he allegedly discovered for the first time the importance of the subcutaneous portion of the external sphincter, which is in fact one-tenth of the EAS and plays no role in fecal continence; [4] To justify the destruction of the anal canal, Peña began to call it a fistula or a rectal pouch or a rectum. Peña's claim of excellent results was false because: [1] he never compared the results of PSARP with the results of other surgeries; [2] he never showed the long-term results of his surgeries; [3] he baselessly claimed that PSARP was the ideal operation for all types of ARMs, and that poor results were due to: (a) the absence of the anal canal, (b) maldevelopment of the spine; (c) poor surgeon skills. However, the long-term results of low-type ARMs (congenital anal stenosis, perineal and vestibular ectopia of the anus) after a cutback procedure preserving the anal canal were good in 90% of patients. After PSARP, using the same assessment, poor results were in 100% of patients [1]. Since Alberto Peña invited pediatric surgeons who had completed the Peña Course in Cincinnati to an international conference in 2005, the Crackenback classification was adopted and became the mandatory protocol for pediatric surgeons. Peña has not published a single scientific paper. However, articles that contradict Peña's false claims are not published in pediatric scientific journals. His "experience" based on false claims was used to educate pediatric surgeons for 20 years. Numerous articles by Peña and his followers, and the lack of articles criticizing them, created the perception that PSARP is the ideal procedure. Because the articles do not cite the results of previous scientific studies, modern research by physiologists and colorectal surgeons for adults, pediatric surgeons are unaware of the normal physiology of the anorectum. Recognition of PSARP as the ideal procedure halted (effectively banned) scientific research in pediatric colorectal surgery. Currently, publications devoted to surgical treatment of ARM reflect two trends. Some authors, while claiming good results after PSARP, however acknowledge that it damages muscles or the perineal body, which justifies their proposals for less traumatic methods. Another category of more numerous authors, engaged in statistical manipulation, proves that the quality of life in children who have undergone PSARP differs little from that of healthy children, despite chronic constipation and fecal incontinence. We will consider these categories separately.

Trend 1: To search for less traumatic operations than PSARP.

The article by Halleran et al. describes a new operation that does not name the author of the idea. Ten patients were operated on with the new method in six different hospitals, including four different states in the United States, as well as in Ireland and Canada. How they were distributed is not known. The introduction states that “The key problem with the cutback

anoplasty for rectovestibular fistulae is inadequacy of the perineal body in females, and there is evidence that the PSARP results in superior outcomes in this population [2].” However, this statement is contrary to the truth. First, cutback anoplasty was used for low types of ARMs, since it was known that with visible fistulas (vestibular and perineal ectopy) there is a normally functioning anal canal and in order for the patient to have no problems with fecal and defecation continence it was only necessary to cut the narrow ectopic anus so that there was no obstruction to emptying. The operation which Browne recommended is a simple backward incision from the displaced opening right across the normal situation of the anus, made by placing one blade of a pair of dissecting scissors in the bowel while the other lies on the skin. Browne warns that "No attempt should be made to suture the raw surfaces thus produced, and after a month or two they will be covered with supple and satisfactory new skin" [3]. It follows from this that the cutback procedure cannot damage the perineal body. I compared the long-term results of treatment of perineal fistula with the cutback procedure with PSARP, using the same assessment method that was used before 1982. Ratings were deemed as “good” when normal fecal retention and absence of constipation were achieved, “fair” when patients required laxatives or enemas, and “poor” when fecal incontinence and/or uncontrollable constipation occurred (Table 1) [1].

Table 1: Remote treatment results after cutback (1-4) and after PSARP (A-D).

Authors	Good (%)	Fair (%)	Poor (%)
1. Nixon [4]	98	0	2
2. Ackroyd et al. [5]	85	15	0
3. Kyrklund et al. [6]	90	8	2
4. de la Fuente [7]	90	?	?
A) Schmiedeke et al [8]			≈ 60
B) Lombardi et al. [9]			≈ 61.4
C) Stenström et al. [10]			≈100
D) Abo-Halawa et al. [11]			?

Therefore, the authors' statement that "long-term follow up of patients with perineal and vestibular fistula undergoing cutback anoplasty found a high incidence of soiling" [2], is not true. After cutback procedure in patients with perineal fistula, there is never fecal incontinence, and constipation may occur if the operation was performed after megarectum developed, but it goes away over time [6]. In girls with a vestibular fistula, cutback anoplasty, performed before the development of the megarectum, leads to normalization of the physiology of the anorectum [3,4,5]. The proximity of the neoanus to the vulva can be changed by cosmetic correction at an older age if desired by the patient [12]. After pull-through surgery, especially after PSARP, the very poor results are explained by the destruction of the normally functioning anal canal that was present from birth. In a systematic review by Rigeros Springford et al., long-term active problems were as follows: fecal incontinence, 16.7% to 76.7%; chronic constipation – from 22.2% to 86.7%; urinary incontinence - from 1.7% to 30.5%; ejaculatory dysfunction – from 15.6% to 41.2%; and erectile dysfunction - from 5.6% to 11.8%. [13]. As shown by Chong et al., PSARP leads not only to fecal incontinence and severe chronic constipation, but also to serious damage to the urinary system. From 50 patients in median age at last follow up was 18 years (range 12–34 years) after ARMs correction (4 with cloaca), chronic kidney disease stage II or above was found in 14 (28%) patients, of whom four

required a renal transplant. Abnormal bladder outcomes were found in 39 (78%) patients. Augmentation cystoplasty with Mitrofanoff had been performed in 12. Of those who had not undergone cystoplasty, 17 had urinary symptoms, including urinary incontinence in 12. Of the 39 patients with abnormal bladder outcome, 19 (49%) did not have a spinal cord abnormality. There was also no significant statistical association between level of ARM and abnormal renal outcome or presence of bladder abnormality [14]. The reference “5” to the article by Stephens and Smith (1971) cannot confirm the superiority of PSARP because this method was described in 1982.

Inference

The authors did not perform the cutback procedure. To evaluate (revise) this method, they refer to the article by Potts et al. (1954), who did not have time to learn about the study of Stephens (1953). Stephens proved the presence of the anal canal below the pubococcygeal line in low types of ARMs [15]. From 1953 to 1982 there was a whole era when pediatric surgeons successfully performed the cutback procedure, but the authors of the peer-reviewed article completely ignored them, including the Browne article, to which they refer. It follows that the authors goal was to unfairly discredit the cutback procedure to present PSARP as the method of choice, even though PSARP destroys the anal canal, which is preserved in the cutback procedure. Thus, the authors used false rationales to promote surgical treatment that is detrimental to patients' health.

About the diagnosis

The authors call the pathology in 10 patients "ARM with rectoperineal fistula". Following the unsubstantiated "practice" of Peña, it means that the rectum is connected to a narrow rigid opening in the perineum by a long fistula canal (Figure 1c), which does not ensure the normal function of fecal retention and defecation and therefore must be removed. Following Peña, they stubbornly ignore scientific data about the presence of the anal canal in low-types of ARMs. The basis for the removal of the internal anal sphincter called "fistula" is based on research, such as the article by Holschneider et al, The authors stated that " the recommendation to use the distal rectal pouch and parts of the fistula in the reconstruction of anorectal malformations should be reconsidered", because they found in distal specimens aganglionosis in 31% of the rectal pouch specimens, hypoganglionosis in 38%, neuronal intestinal dysplasia (NID) type B in 14%, and dysganglionosis in 10% [23]. However, this conclusion cannot be considered justified because the findings should have been compared not with rectum, but with the distal part of the intestine of healthy children, i.e., with the anal canal. Meanwhile, already at that time it was already known that in healthy children there is no intermuscular nerve plexus in the anal canal [19]. In several articles, the authors recommend removing the fistula, since all normal anal histological features could not be found together in the fistula tissue [24, 25, 26]. This did not consider that the IAS was removed several months after the colostomy and that it was injured during extirpation. Other authors found an anatomical displacement of the "fistula" compared to its normal location [27]. This is explained by the fact that the ectopic anus is attached anteriorly from the anal dimple. However, during defecation it functions normally. This is not visible during anatomical examinations but is recorded on radiography [17,28]. All these authors had no basis for asserting the impossibility of using a "fistula», since they did not consider either normal for the anal canal physiological studies (manometry, radiography) or the normal function after operations that preserve the anal canal.

Halleran et al. draw the attention of readers to the fact that "the fistula opening (yellow circle) is small and located within the anterior extent of the elliptical sphincter complex" (Figure 1a-b from the article by Halleran et al [2]). As a result of centuries of research into the anatomy, all the muscles of the anorectum are divided into the muscles of the pelvic floor (levator plates and PRM), which are located above the pubococcygeal line, and the muscles of the anal canal, which are located below the pubococcygeal (p-c) line. These include the internal anal sphincter (IAS) and three portions of the external anal sphincter (EAS) (deep, superficial, and subcutaneous). In radiograph 1e, the large blue circle schematically shows the sizes of the deep and superficial parts of the EAS in a patient with perineal ectopy during an attempt at defecation. The subcutaneous part of the EAS is located between the button glued to the anal dimple and the wall of the open anal canal (small blue circle). The circular muscle of the subcutaneous portion of the EAS contracts briefly during a sudden increase in abdominal pressure. It occupies about 1/10 of the total length of the EAS and its thickness in newborns is 2 mm, and in children under one year - 4 mm [17]. Its intersection during the cutback procedure never leads to fecal incontinence. Peña, in PSARP, transected all the muscles involved in fecal continence (the PRM, the deep and superficial portions of the EAS, which he called the muscle complex). Only the subcutaneous portion of the EAS he did not cut, which he called the external sphincter because it was on the outside. He alone, of thousands of pediatric surgeons who have operated on children with ARMs over many centuries, made the discovery (without reference to any studies), that the external sphincter (the subcutaneous portion of the EAS) is an important muscle in fecal continence. In the article by Halleran et al., the authors first began to call the subcutaneous part of the EAS a muscle complex. They called the subcutaneous portion of the EAS, which is a circular muscle and is visible as a ring-shaped muscle (Figure 1a), the elliptical sphincter complex (Figure 1b).

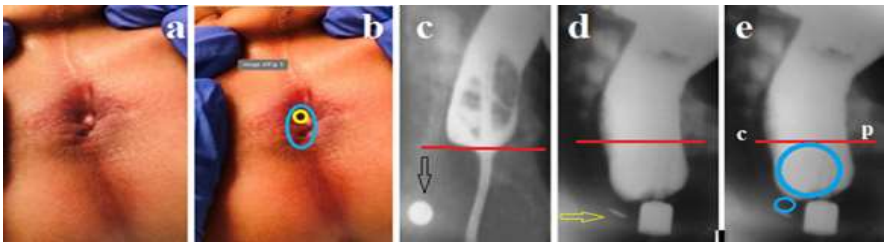

Figure 1(a-b): Photographs from the article by Halleran et al. [2]. Explanations in the text above. (c). ARM with perineal ectopy of the anus. The pellet (arrow) is glued to the anal dimple. Barium suspension is injected through a catheter inserted into the rectum. The anal canal, located caudal to the p-c line (red line), closed around the catheter, preventing leakage of barium. (d). In the same patient, an attempt to defecate occurred during the introduction of barium on re-admission. The button glued to the anal pit (yellow arrow) is 4 mm from the wall of the open anal canal. Between them, in the subcutaneous tissue, is the subcutaneous part of the EAS. (e). The diagram (d) shows the difference between the lengths and volume of the deep and superficial parts of the EAS versus the subcutaneous part.

Inference

The article Halleran et al. [2] includes only those patients whose exit orifice was located surrounded by the subcutaneous portion of the EAS. It may seem that they are describing a previously unknown type of ARMs. However, both the photographs and the case description correspond to a known type - congenital anal stenosis, which is characterized by fibrous changes near the opening and the presence of a normally formed anal canal [3,4,5,8]. The authors invented an elliptical EAS, which served as justification to cross the anal stenosis along with the subcutaneous portion of the EAS. As a result, they were essentially performing a cutback procedure but gave it a different name. The presented analysis of this article revealed numerous ideas that contradict the generally accepted anatomy and physiology of the anorectum, ignoring the presence of the anal canal to discredit anal canal-preserving surgeries. This is the result of the chaos that Peña brought to pediatric colorectal surgery to promote his proposed PSARP.

Figure 2: The operational steps from the article by Halleran et al. [2].

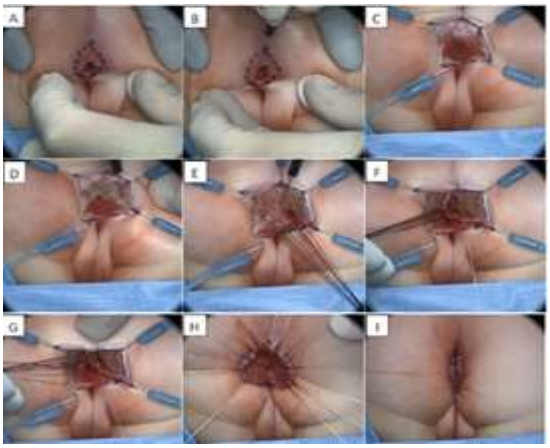

Figure 2: In Figures A and B, a cone is depicted whose apex is located at a greater distance from the posterior edge of the narrow anal opening than on the other sides. In Figure C, it is evident that dissection of the stenotic opening to the apex of the cone resulted in a wide anal opening. This was made possible by transecting the subcutaneous part of the EAS. This part of the operation is identical to the cutback procedure. In Figures D–G, the posterior rectal wall is dissected, starting at the lateral mucocutaneous junction and proceeding posteriorly, sparing the anterior half of the squamocolumnar junction. The authors believe that “there is virtually no distal rectum that is discarded, thus the inherent value of the distal rectum (the internal sphincter present within the anorectal wall) is preserved” [2]. Since the internal anal sphincter (IAS) is located only in the wall of the anal canal, this means the authors dissected the posterior wall of the anal canal, not the rectum. In Figures H and I, the dissected IAS wall is sutured under tension to the skin around the anus.

Inference

The new version of anoplasty proposed by the authors has no scientific basis. It is based on 6 false assumptions. (1). The described case is not a perineal fistula, but congenital anal stenosis; (2). In congenital anal stenosis, as in perineal fistula, there is a normally functioning anal canal, which the authors call a long fistula or rectum. Meanwhile, a pathological narrow rigid fistula is only located in the site of penetration of the IAS through the subcutaneous tissue and skin. The length of the fistula is 2 mm in newborns and 4 mm in children of the first year of life; (3). Under the skin around the fistula there is a subcutaneous portion of the EAS, which is a very weak thin muscle (about 1/10 of the total length of the EAS). Its dissection during the cutback procedure does not lead to any consequences. The description of the subcutaneous part of the EAS under the name "sphincter complex" invented by the authors, which supposedly has an ellipse configuration, contradicts scientific research, since the subcutaneous part of the EAS is a ring-shaped muscle. (4). In ARM with visible fistulas, the IAS is located above the subcutaneous part of the EAS, as is normal. There's no point in dissecting the IAS from its usual attachment site, isolating it high from the surrounding tissue, and then sewing to the skin under tension, as the skin is further away than IAS was attached before surgery. The only effect of this part of the operation is denervation of the IAS. (Figure 3).

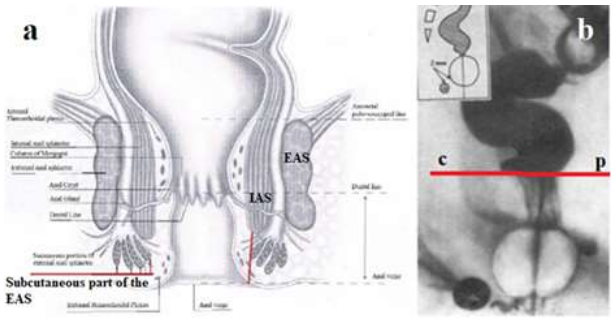

Figure 3: (a) The diagram of the anal canal from the article by Jorge JMN, Habr-Gama A. (Anatomy and Embryology of the Colon, Rectum, and Anus. In: Wolff B.G. et al. (eds) The ASCRS Textbook of Colon and Rectal Surgery. Springer, New York, NY 2007; 1-22.). The distance between the distal edge of the IAS and the skin near the anus is shown by the vertical red line on the right. The subcutaneous portion of the EAS is represented by scattered muscle bundles on the left. (b) Lateral radiograph of the anorectum of patient with vestibular ectopia of the anus with contrasting of the rectum and lowering of the Foley catheter balloon into the anal canal until it stops above the narrow ectopic anus. Contrast marker is glued to the anal dimple. Red lines are drawn along the border between the rectum and the anal canal (pubococcygeal line). The length of the anal canal is equal to the distance from the p-c line to the contrast marker. The distance between the wall of the anal canal and the contrast marker, where the subcutaneous part of the EAS is located, is 2 mm, with the length of the anal canal being about 2 cm.

Thus, the proposed operation consisted of two stages. First, a dissection of the stenotic ring (cutback) was performed. It solved all the problems. The second stage did not make no sense. INot only was it unnecessary, but it inevitably led to disruption of the IAS function. Why was the IAS separated from its normal insertion site and then sutured to the skin with

great tension? Why was Browne's statement ignored: "No attempt should be made to suture the raw surfaces thus produced, and after a month or two they will be covered with supple and satisfactory new skin" [3]? Is it known that sutures, especially with tension, contribute to the inflammatory process and the development of secondary stenosis? What do the results of operations of patients aged "under 8 months of age" say? Surprisingly, all 10 patients with a very rare type of ARMs, operated on in 6 different hospitals, had their surgical results registered after 6 months. In "all patients were passing stool spontaneously. No patients required dilation of the anoplasty in the postoperative period" [2]. Firstly, the analysis of the article raises doubts that these patients actually existed. I contacted the authors of the article with a request to clarify the data on the operated children, but no one answered me. Secondly, it is known that early postoperative results are always the same. Thirdly, as can be seen from the article by Levitt et al, based on a review of 398 with good prognosis (read low types of ARMs) for bowel control, the greatest risk for severe constipation and its consequences (fecal impaction, overflow pseudo incontinence, and megacolon) was discovered [30]. Doubts about the reliability of scientific facts did not dissipate after the publication of the same operation described 4 years later by Xu et al [31]. The aim of this article was to describe "long-term postoperative outcomes" for the period 2020-2023. However, this goal proved unattainable due to the short postoperative period, so the authors again, as in the first article, described the length of hospital stay, the time to the first feeding and early stool patterns [31]. A retrospective, single-institution study was performed examining 18 male patients with a rectoperineal fistula. This statement contradicts scientific facts and other statements of the authors. (1). As proven above, the described type of ARM is a classic description of congenital anal stenosis; (2). It is detected in only 2% of patients with ARMs [32], which contradicts the possibility of observing it in such a number in a single institution over a period of 4 years. (3). Only two authors of this article (Wood and Levitt) were co-authors of the 1st article published in 2020 [2]. The fact that 7 of the 9 co-authors who did not respond to me about their participation in first strange article did not provide treatment results in the 2nd article confirm my doubt that they did operate on these patients. (4) Although it is written that this study in a single institution was carried out, it is not clear what the role of the authors working in 2 other institutions is.

A lie that is repeated often begins to be accepted as truth. This principle has been in use by Peña and Levitt since 1982 and continues to this day. In a program article they stated, "Except for patients with rectal atresia, most patients with anorectal malformations are born without an anal canal; therefore, sensation does not exist or is rudimentary" [33]. This statement was unsubstantiated without citing any research. It was false, since it was proven that «Anal sensibility was better in those with a functional IAS. This means that the IAS, present in the distal end of the fistula, should be spared as much as possible to preserve anal sensibility aiming to maintain the best possible fecal continence" [34]. The authors claimed without evidence that Important associated anomalies include genitourinary defects, which occur in approximately 50% of all patients with anorectal malformations, and poor surgical results are due to pathology of the sacral spine [33]. The first statement assumes that urological anomalies (vesicoureteral reflux, bladder dysfunction, chronic kidney disease) are a congenital anomaly. However, the paper by Chong et al., was shown that "In one fifth of patients born with anatomically normal upper tracts develop reduced renal function, implying an important acquired component [35]. They did not demonstrate an association between level of ARM or presence of spinal cord anomaly with persistent bladder problems [35]. There was no statistically conclusive evidence that tethered cord by itself affects the urinary or fecal control in these

patients [36]. Children with complex ARM have 3.4 times genital and 2.3 times urinary anomalies than less complex forms. [37]. It was noted that there are changes, although statistically insignificant, in the neurovesical function of these patients following PSARP [38].

Inference

Literature analysis shows that anatomical pathology of the anorectum in ARM is accompanied by anatomical pathology of the genitals and spine. The higher the ectopia of the anus, the more often and more severely the pelvic bones change. But no evidence was obtained that this affects the function of fecal continence or the function of the urinary system. On the other hand, reliable evidence was obtained about the damaging effect of PSARP on the function of fecal continence and defecation, as well as on the urinary system function. The higher anal ectopy, the more intense the pelvic dissection, the more complications after PSARP. For several decades, PSARP was considered the ideal operation for all types of ARM. Articles on anterior sagittal anorectoplasty and anoplasty using laparoscopy were allowed to be published because they were based on the same false principles as PSARP: denial of the anal canal justified pull-through operations. In the article by Halleran et al., for the first time in many years, Levitt proposed an operation that has an advantage over PSARP. "The main technical advantage of the PRAA is that it obviates the need for any anterior rectal dissection, thereby mitigating the risk of urethral injury in males or vaginal injury in females" [2]. Although they demonstrate multiple misconceptions, including the statement that the IAS is a long fistula, the trend toward finding more reliable treatment methods is obvious. In the article by Badillo et al., the authors led by Levitt describe four cases of girls with vestibular fistula operated on allegedly with modified PSARP [39]. However, the technique described is known as perineal anal transplant [40, 41] and it has nothing to do with PSARP. It should also be considered an escape from PSARP. This trend is also noticeable on the European continent. In the article Mašić et al., note that "Despite good outcomes, PSARP risks sphincter transection, perineal body dehiscence, and stenosis." Therefore, they proposed the sphincter-preserving anorectoplasty from the anterior approach [39]. This article describes a procedure called the sphincter-preserving anorectoplasty (SPARP) by the authors. The technique was developed by Peter K. Kottmeier, who is not listed as an author of the article, and Francisca Tolete Velcek. All surgeries were performed by Mašić in 46 patients (7 with rectovestibular fistulas and 39 with rectoperineal fistulas in 14 men and 25 women) treated from January 2017 to December 2024 in Zagreb, Croatia. The remaining authors, including those from the USA, Netherlands and Serbia "were participating in the perioperative management" [42]! The article cites the long-described technique of perineal anal transplant [40,41], but laden with all the false claims that were spread by Peña and Levitt. For example, the focus is on preserving the so-called sphincter complex, meaning the subcutaneous part of the EAS, which is not essential for fecal continence. At the same time, the IAS called the "rectum" is separated from the surrounding tissues to the pelvic floor muscles, because of which its innervation and blood supply are disrupted, which leads to a violation of anorectal reflexes. The statement that at the final stage the PRM and EAS are sutured is surprising. Because from the perineum it is impossible to differentiate the PRM from the deep and superficial parts of the EAS. Observation for 3-89 months, the median is 37 months, does not allow us to judge the functional results. However, since constipation was the main problem observed in 11 patients (55%), this indicates that they had a discrepancy between the width of the rectum and the throughput of the newly created anal canal, threatens the progression of megacolon. The European Arm-Net Consortium article acknowledges that "According to present

knowledge, the “fistula” in ARM represents an ectopic anal canal and should be preserved as far as possible to improve the chance for fecal continence" [43].

Conclusion

More than 40 years of massive propaganda of PSARP, which Alberto Peña unfoundedly declared as the ideal operation for all types of ARMs, attracted the attention of pediatric surgeons. Those of them who believed Peña were free to publish articles devoted to their experience using this approach. Thus, pediatric surgeons, who did not realize the value of scientific evidence, became authors of numerous articles and leading specialists. As experts, they suppressed the publication of articles by those pediatric surgeons who found contradictions in Peña's works. The articles I analyzed are an example of the chaos that reigns in this area of pediatric surgery. Understanding the devastating impact of PSARP, like other pull-through operations, is only the beginning of recovery. For patients with ARMs to receive evidence-based treatment, it is necessary to get rid of the misconceptions that Peña, Levitt, de Blaauw, and others have imposed on practitioners. This review suggests that children with ARMs can be healthy after scientifically based treatment.

Trend 2: The desire to prove that after PSARP, patients are as happy as their healthy peers, despite constipation and fecal incontinence.

The long-held belief that PSARP is the ideal treatment for ARMs is based on Peña's assertions, which are contrary to scientific evidence. This misconception has hindered research into improving care for ARMs patients for 40 years. Instead of developing anal-preserving methods, the authors' efforts were focused on: (1) developing sophisticated spine and pelvic bone examination methods to predict poor treatment outcomes; (2) Introducing a "bowel management" program to cleanse the bowel to prevent fecal incontinence. Although "bowel management" can improve the Rintala Bowel Function Score, it cannot prevent repeat perineal surgeries, rectosigmoid resections, urinary dysfunction, etc. (3). The use of an antegrade continence enema only adds another surgery and its complications, without any advantages over a retrograde enemy. After 40 years of senseless anal destruction, some of Peña's former associates, pressured by irrefutable facts, began seeking alternative surgical treatments. However, most articles are devoted to examining evidence that PSARP results are acceptable and that, when using bowel management programs, adult surgeon-supervised transition programs, these patients can be as happy as their healthy peers. As an example, consider the article by Baldanza et al. (2025) [44].

First, the authors ignore all the scientific achievements of previous generations. Their article contains no understanding of the anatomy and physiology of the anorectum in normal conditions and with ARMs. Considering PSARP as the ideal surgical treatment for ARM, they confirm that their belief in the infallibility of Peña's ideas, rather than an analysis of his articles, reflects their negative attitude toward scientific fact as the only true proof of truth. Doctors who blindly believe Peña's false claims are not scientists.

Secondly, the authors violate the basic laws of statistics. From the review of clinical records, out of "77 patients born with ARMs between 2002 and 2020 five (6%) died due to associated conditions". "17 (22%) could not be traced so they were excluded for incomplete data". Only 55 (71%) patients were included in the study and responded to questionnaires. How can one judge quality of life as a percentage if the 29% with more severe cases of ARMs were excluded from the sample?

The subjective data from individuals without medical training, interested in a good outcome, and dependent on medical personnel have no scientific value. «From the collected medical history, 25 patients (45%) had issues related to constipation, while 9 patients (16%) were diagnosed with fecal incontinence. 34 patients (62%) required a bowel management program (enemas and laxatives for constipation and enemas for fecal incontinence) ». However, the percentage of patients with constipation based on questionnaire data represents the tip of the iceberg. Only an X-ray determination of rectal width outside the age-appropriate norm reveals the problem, which will intensify with age, despite the bowel management program. In the peer-reviewed article, low types of ARMs (perineal, vestibular) were detected in 39 (70%) of 55 patients analyzed in the article. The authors describe excellent results in 25 (64%) of them, and good ones in 7 (18%). In total, excellent and good results after treatment of low types of ARMs were observed in 82% of patients. (1) The presence of excellent and good results contradicts reliable scientific data. Thus, in the article by Levitt et al., based on a review of 398 patients with good prognosis bowel control (read: low type ARMs), the highest risk of developing severe constipation and its sequelae (fecal impaction, overflow pseudoincontinence, and megacolon) were found [30]. In a systematic review by Rigueros Springford et al., long-term active problems were as follows: fecal incontinence, from 16.7% to 76.7%; chronic constipation, from 22.2% to 86.7%; urinary incontinence, from 1.7% to 30.5%; ejaculatory dysfunction, from 15.6% to 41.2%; and erectile dysfunction, from 5.6% to 11.8% [12]. (2). From a theoretical point of view, functional outcomes cannot be good after any pull-through surgery. All of them are based on the false notion of the absence of the anal canal. As a result, the IAS is extirpated, and in its place, the rectum, whose function is to accumulate, not retain, feces, is lowered. It is isolated from surrounding tissues and separated from the levator muscles, which normally open the anal canal to reduce resistance to the passage of feces. This always involves transecting the supplying blood vessels and invisible nerve endings that connect the pelvic organs and provide the reflex connection necessary for the reflexes of fecal retention and defecation. In PSARP, unlike other approaches, the PRM, which acts as a sphincter, is also transected, and 90% of the EAS is longitudinally dissected, and cut off from the coccyx. Only the subcutaneous portion of the EAS is not dissected, but it does not role in fecal retention. Thus, instead of a normally functioning anal canal, a perineal fistula is formed [1, 28]. Approximately 50% of these patients suffered from chronic constipation. Bladder dysfunction symptoms were observed in 24%. No patients had fecal incontinence, as they underwent bowel cleansing and the follow-up period was short. It is impossible to call the treatment outcomes of these patients favorable based on subjective responses to a specially developed questionnaire (Rintala). The conclusions of this article, which justify destructive surgery (PSARP) are not reliable and cannot be considered scientific. And the fact that this method has been copied in numerous articles devoted to the quality of life of patients operated on for ARMs does not add to its scientific credibility.

For example, in the article by Wigander et al. (2019), out of 64 patients with low ARM born 1993 to 2007, only 23 (36%) sent completed questionnaires. A control group comprising children who had visited Astrid Lindgren Children's hospital for a minor procedure was used for comparison. To the detriment of truth, these children are called healthy controls, even though they were not examined. Compared to the control group, the children and adolescents with low ARM reported significantly lower function in the physical symptoms, fecal continence and laxative diet. Differences were also found in the emotional functioning, in which children with ARM scored lower functioning, although the result was not significant. The authors concluded that children and adolescents with low ARM did not differ regarding their QoL, even though they

appeared to have impaired bowel function and worse emotional functioning compared to the healthy control group [45]. These data contradict not only objective research methods but also other questionnaire-based studies. According to Hamid et al., in patients with low-type ARMs soiling was in 43%, constipation was seen in 62% and abdominal pain in 49%, with no significant difference between malformation levels. 44% had a documented urological abnormality. Among all types ARM eighty percent of the children had one or more behavioral problems and 15% expressed suicidal thoughts. Despite these findings, 62% of adolescents and 71% of children below 12 years were full of optimism, remaining hopeful for the future [46]. Tannuri et al., based on a study of 63 patients, concluded that patients operated for ARM correction, quality of life and Fecal Continence Index Questionnaire were compromised, and there was no difference between patients with high-type and low-type of the disease [47]. A study by Lange Meijer and Molenaar showed that subjectively (consisting of anamnesis), most patients were incontinent, with soiling of pants at least once a day. Based on objective criteria (electrostimulation, defecography, and anorectal manometry), virtually all patients appeared to be incontinent. They concluded that despite a good aesthetic result, patients will never achieve normal continence [48]. Based on a large clinical sample, Stenström et al. [10] and Schmiedeke et al. [8] showed that a significant percentage of patients with low-type ARMs suffer from fecal incontinence and chronic constipation. A PubMed search for "anorectal malformations quality of life" shows 250 articles. Nineteen articles were published in the first nine months of 2025. The American Pediatric Surgical Association Outcomes and Evidence Based Practice Committee drafted consensus-based questions regarding anorectal malformations. Pertinent 10,843 publications from 1985 to 2021 were reviewed with 109 being included in the final recommendations [49]. For example, (1) "continence and constipation rates were higher in patients with perineal fistula and rectovestibular fistula, although symptoms tended to improve as patients got older." What is the meaning of this recommendation, which reflects a frequently cited statement in articles of questionable objectivity? It contradicts the assertions of some authors that all patients after PSARP have varying degrees of fecal incontinence [46,47,48]. The assertion that chronic constipation symptoms are relieved by intensive treatment with enemas and laxatives contradicts articles that claim that a period of decompensation occurs with age, resulting in these patients undergoing repeated surgeries with temporary relief [50]. A significant proportion of patients receive long-term treatment with antegrade continence enema [51, 52]. (2) Urological anomalies are common, and longer-term urological surveillance protocols for patients with ARM need to be further outlined. As shown above, most urological complications result from pelvic denervation during PSARP. (3) Sexual and psychosocial issues are common, but ARM patients can have a good quality of life when gastrointestinal symptoms are minimized. Forty years have passed since the introduction of PSARP, but there is not a single study on the condition of patients in their 30s and 40s.

The stated purpose of the article Rialon et al. [49] is more than strange: to determine the consensus on functional outcomes for ARMs for optimal patient counseling. All similar articles are based on the false notion of the absence of an anal canal and the belief that PSARP is an ideal procedure. Their actual goal is to maintain the status quo. Based on subjective responses to specially tailored questionnaires, by manipulating the selection of only a part of surgical patients, and ignoring the pathological physiology of the ARM, the authors conclude that postoperative patients can be almost as happy as healthy ones. Instead of doing research to develop methods that preserve the anal canal, these articles slam the door to anything new.

Conclusion

Alberto Peña managed to convince practicing physicians that his experience, not the results of scientific research, solves all the problems of pediatric colorectal surgery. Massive propaganda has created a generation of pediatric surgeons ignorant of the anatomy and physiology of the anorectal area, both in normal and ARMs. However, faith and science are incompatible. The authors assume that there is no anal canal in ARMs. This belief is so strong that they ignore articles that irrefutably prove the presence of an anal canal, the preservation of which ensures normal continence and defecation. A review of the literature revealed two trends. (1) Some pediatric surgeons, who recently advocated PSARP, understand its destructive nature and are moving to less traumatic procedures. (2) Another, more widespread category of pediatric surgeons employs methods far from scientific to assert status quo and halt scientific research to improve treatment for patients with ARMs**.**

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