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Historical Vignette

Asa G Yancey: The first to describe a modification of the Swenson Technique for Hirschsprung disease

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ABSTRACT

Hirschsprung disease is a common disease treated by surgeons using different approaches. One approach is eponymously ascribed to Franco Soave and Scott Boley involving a pull-through of ganglionated colon through a distal portion of aganglionated rectum. However, more recent evidence has shown that this same technique was described twelve years before by Asa Yancey, a black surgeon. A review of the evidence follows with a focus on why Yancey may not have rightly received the credit that was because of him.

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1. Introduction

Ovar Swenson was the first to propose a resection of the affected portion of Hirschsprung Disease (HD) and to perform an anastomosis in 1948. This marked the first time that the true diseased portion was ascertained and removed to allow normal colonic function [1]. Following this first successful approach for HD, another surgical approach was described which consists of an endorectal pull-through. The key elements of this procedure include (i) isolation of the ganglionated colon, (ii) removal of the aganglionic segment down into the pelvis, (iii) resection of the mucosa of the most distal rectum and splitting the muscular cuff, (iv) pulling the ganglionated segment through the split cuff of the aganglionic, demucosalized segment, and (v) anastomosis of the ganglionated segment above the dentate line. This procedure is different from the Swenson approach because not all the aganglionic rectum is removed. It is believed this newer approach avoids injury to surrounding structures and thus confers advantages for the patient. For the last half a century, many pediatric surgeons have performed this procedure with technical advancements, yet the steps have largely remained the same. The common eponym attached to this procedure has been a **Soave** or a **Soave-Boley** procedure.

2. Current belief

Franco Soave was an Italian pediatric surgeon who described this approach in 1964 in his paper "Hirschsprung's Disease: A New Surgical Technique" in the journal, Archives of Diseases of Childhood [2]. He continued to propose this technique for many years, speaking about this approach around the world and receiving credit for conceiving of this method. His original operation left the aganglionic bowel protruding from the anus without resection. In time over days to weeks, as inflammation caused an auto anastomosis between the pulled through bowel and rectum, the aganglionic bowel was then removed. The operation was performed in the staged manner to help avoid the potential complication of anastomotic leak and sepsis. Soave died in 1984. However, it was **Scott Boley** who would add to Soave's procedure with his paper published in 1968 that added the resection and anastomosis at the time of the initial surgery [3]. Boley was also a pediatric surgeon and worked in New York. He died in 2020 at the age of 92. Both Soave and Boley are now credited with this particular operation for Hirschsprung disease.

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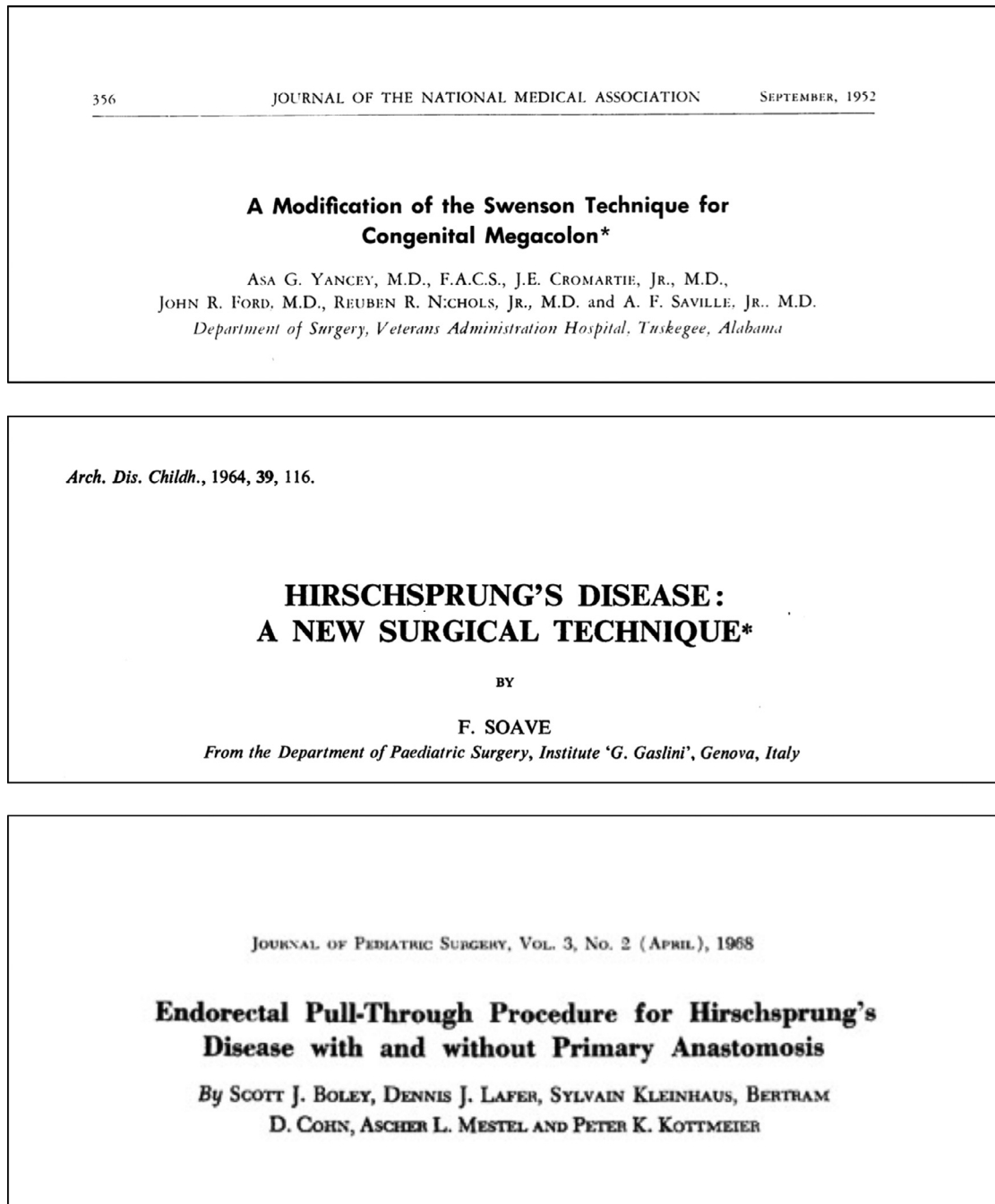


Fig. 1. Title and reference for the Yancey (top), Soave (middle), and Boley (bottom) manuscripts.

3. Additional evidence

Asa G Yancey was a Black American general surgeon, who is renowned for his innovation in surgery and is considered a giant in the US surgical community Fig. 1 [4]. In 1952, he published a paper entitled, "A Modification of the Swenson Technique for Congenital Megacolon" in the Journal of National Medical Association (JNMA) [5]. This journal served the purpose to unify and bring a voice to black health professionals, in medicine and surgery, at a time when there were not many mediums for black physicians to present their work. In the paper, he describes an adult with HD for which he performed all the above steps that are described in Soave and Boley's papers. He published his paper in JNMA, 12 years prior to Soave [2] and 16 years prior to Boley et al. [3] (Fig. 1).

Unfortunately, this patient would die 9 days later because of mal-rotation with midgut volvulus. However, the colo- anal anastomosis was noted to be intact and healthy [5]. Although, there was no complication because of surgical technique, this surgical procedure would not be described and reported again until 1964 by Soave [2]. Even with his earlier publication, Yancey did not receive the initial credit for this surgical approach for HD.

4. Reflections

4.1. Surgeon in Black America 1950s–1960s

Juxtaposed against the backdrop of the civil rights movement and the fight for social justice was the inequity of health care

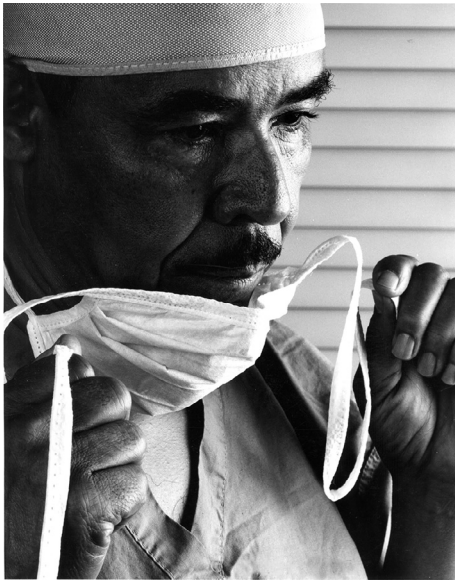


Fig. 2. Asa G Yancey (Photo courtesy of Emory University Photo Video).

provided to black patients and the paucity of resources black healthcare providers had to provide for their communities. Black physicians were striving to provide adequate care in a system that did not see themselves or their patients as equal. The hospital systems either outright denied care to blacks or separated their patients based on race. Despite this clinical environment, Yancey was still able to innovate and play a leadership role within surgery. Yancey's patient was being treated in Grady Hospital, which at the time, was predominantly a hospital that cared for the black population of Atlanta and was segregated away from the greater white community.

Yancy published his surgical experience in the JNMA. Expectedly, JNMA had a smaller readership, as its main audience was the black American healthcare professional community. In a time when it was difficult for black voices to be heard, the JNMA provided a medium for black physicians to present their advances and innovations in medicine. However, the dissemination of his article likely did not have a significant amount of readership among most white healthcare professionals. Additionally, at the time of its publication, there was no electronic method for searching articles, and others within the medical community would have had to specifically seek for the article in the JNMA. Given the racial bias of the time, there was undoubtedly a component of discrimination that led to the lack of credit given to Yancey for first conceiving and performing a commonly used surgical approach for HD today.

4.2. Yancey was not a "pediatric surgeon"

Pediatric surgery is a relatively new field compared to many others having essentially become a specialty in the early 1970's. The pediatric surgery community is relatively small, and communication of new techniques often are reported in conferences

attended by pediatric surgeons or journals more specific to pediatric surgery or at the time, surgery in general. Yancey was not a pediatric surgeon and thus not likely known in that community, setting up another barrier for his surgical innovation to be presented to the pediatric surgical community.

4.3. The patient was an adult

The patient was not a child and thus the technique while being performed for a congenital lesion technically was not being performed for a pediatric patient. It is possible that the community of pediatric surgeons was not interested in what was being performed on an adult though more likely the procedure had not come to their attention.

4.4. The patient died

Success is often measured based on durable outcomes of a new technique. The patient in Yancey's paper died, although not because of direct complications of the procedure. The colo-anal anastomosis was patent and functional at the time of the patient's death. It is possible that those who read the paper were dissuaded from this approach even though the death was not because of a complication of the procedure. However, it is certainly possible that surgeons would be less convinced to try a new approach if the sentinel article documenting it was associated with death, and the procedure was reported in only one patient.

5. Conclusion

Yancey's innovation in surgical technique to develop the current pull-through procedure in HD has been documented more publicly during the 21st century. However, within the pediatric surgery community, there has been limited credit attributed to Yancey. Taking the evidence into consideration, the endorectal pull-through procedure for HD was first documented by Yancey in 1952. This predates Soave by 12 years and Boley by 16 years. Regardless of whether Soave and Boley were aware of the innovation of their colleague a decade prior, the fact remains that Yancey developed this surgical technique with success specific to the surgery. We believe that it is time for Yancey to formally receive credit within the pediatric surgery community for his innovation, and we would suggest renaming the procedure the **Yancey-Soave-Boley procedure** (Fig. 2).

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