

The Second Razavi International Proctology Congress

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Received: November 3, 2013; **Accepted:** November 5, 2013

The second International Proctology Congress was held on October 17 to 18 at Razavi hospital. Some surgeons of the Italian Society of Colorectal Surgery (Societa Italiana di Chirurgia Colo-Rettale, SICCR) attended the congress.

Keywords: Ultrasound; Colorectal Surgery; Anal Fistula; Faecal Incontinence

1. Purpose of the Meeting

Razavi hospital plays an important role in the field of medical research and tries to provide a good opportunity for the researches and pioneers in different medical fields to share their knowledge. In other words, these congresses are good chances for the physicians who come from all around the world and bring new ideas and methods. Considering the incidence and prevalence of colorectal diseases especially in Iran, these congresses may lead to find the new solutions.

2. Summary of Presented Findings

The rapid evolution of technology over the last decade has led to the development of new instruments, diagnostic appliances and synthetic or natural materials for tissue repair. The terms "quality of life" and "quality of care", are now familiar in proctology. This has radically changed the rules of this sub-specialty. Now the proctologist must have a familiarity with this technological cornucopia and the use of high-tech materials as well in order to pursue a correct diagnosis and a proper treatment of the diseases. Hence a continuous updating in this field is needed to the state of the art. The second International Proctology Congress was held on October 17th at Razavi hospital. Some surgeons of the Italian Society of Colorectal Surgery (SICCR), well-known Italian surgeons and specialists of Gynaecology, General Surgery, Proctology and Gastroenterology from various cities such as Teheran, Shiraz and Mashhad attended the congress. The two-day congress included more than 20 lectures, five live

surgery sessions and three specialty panels.

The latest medical progresses in the field of proctology were presented to the participants. One of the main highlights of the second International congress was the presence of both young and senior surgeons from different parts of the world. One of the main topics was the cause of complicated perianal fistulas and their treatments. Moreover, an endoanal ultrasound workshop was held on October 16th.

2.1. Endoanal Ultrasound Workshop

Anorectal diseases require imaging for proper patient management. At present, endoanal ultrasonography and endorectal ultrasonography have become important parts of diagnostic workup of patients with fecal incontinence, perianal fistulas, and rectal cancer and provide sufficient information for clinical decision-making in many cases. However, with the currently available ultrasonographic equipment and techniques, a good deal of relevant information may remain hidden. The advent of high-resolution three-dimensional endoluminal ultrasound, constructed from a synthesis of standard two-dimensional cross-sectional images, and of "Volume Rendering Mode," a technique to analyze information inside a three-dimensional volume by digitally enhancing individual voxels results in revolutionizing diagnosis of pelvic floor disorders. By using the different post processing display parameters, the volume-rendered image provides better visualization performance in the case there are not large differences in the signal levels of pathologic structures compared with surrounding tissues. The ana-

Implication for health policy/practice/research/medical education:

This is a brief report of the 2nd proctology congress in which some new surgical techniques in the field of proctology is reviewed.

tomical structures in the pelvis, the axial and longitudinal extension of anal sphincter defects, the anatomy of the fistulous tract in complex perianal sepsis, and the presence of slight or massive submucosal invasion in early rectal cancer may be imaged in greater detail. This additional information will bring an improvement for both planning and conducting the surgical procedures (1).

2.2. Haemorrhoidal Disease

Hemorrhoids are common clinical conditions. About half of the population has hemorrhoids by the age of 50 years. It is estimated that 58% of people aged over 40 years have the disease in the USA. Almost one third of these patients refer to surgeons for treatment. Hemorrhoids can occur at any age, and they affect both men and women. The exact incidence in developing countries is unknown, but the disease is being more frequently observed, perhaps due to westernized life style. Report of first recorded treatment for hemorrhoids comes from the Egyptian papyrus dated 1700 bc: "Thou shouldst give a recipe, an ointment of great protection; Acacia leaves, ground, triturated and cooked together. Smear a strip of fine linen there with and place in the anus that he may recover immediately".

Hippocrates in 460 bc wrote about hemorrhoids treatment similar to today's rubber band ligation procedure; thus, "And hemorrhoids in like manner you may treat by transfixing them with a needle and tying them with very thick and woolen thread, for application, and do not ferment until they drop off, and always leave one behind; and when the patient recovers, let him be put on a course of Hellebore".

A Roman physician named Celcus (25 bc-ad 14) described the ligation and excision surgeries as well as possible complications. Galen (ad 131-201) also promoted the use of severing the connection of the arteries to veins in order to reduce pain and avoid spreading gangrene.

The Indian Susruta Samhita, an ancient Sanskrit text dated between the fourth and fifth century AD, described treatment procedures comparable to those in the Hippocratic treatise, but with advancement in surgical procedures and emphasis on wound cleanliness.

By the 13th century, there was a great progress in the surgical procedure, led by European Master Surgeons, among whom were Lanfrank of Milan and Guy de Chauliac, Henri de Mondeville and John of Ardene.

During the 19th century, another mode of treatment for hemorrhoids called anal stretching or rectal bougienage became popular. In the USA, Mitchell (of Illinois) first used carbolic acid for injecting into hemorrhoids in 1871. In 1888, Fredrick Salmon, the founder of St. Marks' Hospital, expanded the surgical procedure for hemorrhoids into a combination of excision and ligation, where the perianal skin is incised, the hemorrhoidal plexus and the muscles are dissected, and the hemorrhoid is ligated. Today's Ferguson and Milligan-Morgan procedures are con-

sidered as a modification of the Salmon's techniques. The diathermy hemorrhoidectomy by Alexander Williams, rubber band ligation by Barron, and the stapled hemorrhoidectomy by Longo were three additional developments in the late 20th century.

Also the treatment of hemorrhoidal disease has undergone changes due to the technological progress. The common operation was developed in the United Kingdom by Milligan and Morgan in 1937. Stapled hemorrhoidopexy (procedure for prolapse and hemorrhoid, PPH) was first introduced by Longo in 1998. Doppler-assisted ligation of the terminal branches of the haemorrhoidal arteries for II and III degree haemorrhoids is highly effective and painless. Complications are few and the technique can be performed as a day case (2).

2.3. Faecal Incontinence

Faecal incontinence is a debilitating problem with significant medical, social and economic implications. Treatment options include conservative, non-operative interventions and surgical procedures. A surgical procedure may be aimed at correcting an obvious mechanical defect, or augmenting a functionally deficient but structurally intact sphincter complex. During the congress, the new techniques for treatment were presented.

The posterior tibial nerve stimulation (PTNS) is a peripheral neuromodulation: it acts as an analgesic transcutaneous electrical nerve stimulation (TENS) and in sacral neuromodulation in the 1970s and 1980s. It has been used for the treatment of chronic pelvic pain and pelvic floor dysfunction since 1983 and nowadays it is also used to treat urinary incontinence. There is some evidence that explains the efficacy of PTNS to treat fecal incontinence. In fact the site of PTNS needle insertion (approximately 5 cm cephalad to the medial malleolus and approximately 2 cm posterior to the tibia) is said to relate to with the SP-6 acupuncture point (spleen-6) and non-electrical stimulation of this point has been demonstrated to improve both FI and squeeze pressures (3).

Among the options, one of them is represented by the transobturator anal sling. The puborectal muscle, turning around the anorectal junction as a belt, leads to the normal anorectal angle which is presumably responsible for continence in normal condition. The puborectalis muscle wraps rectum like a sling. Implant for surgical treatment is a therapeutic option derived from experience by urogynecologists. Bioreabsorbable or non-reabsorbable materials placed (tension free) along puborectalis muscle's line support pelvic diaphragm creating an elastic structure that surrounds anorectal canal bilaterally fastened to obturator foramen (4).

A new type of prosthesis, Gatekeeper™ seems having more encouraging results. The Gatekeeper™ prosthesis comprises thin solid cylinders of HYEXPAN (polyacrylonitrile), a hydrophilic material that becomes thicker, shorter and softer within 24 hours after implantation. Their final

shape yields a considerable volume increase compared with the volume inserted. Patients can undergo treatment with Gatekeeper™ under local anaesthesia and in the lithotomy position. Four or six prostheses can be implanted in the intersphincteric space in each patient, and under endoanal ultrasound guidance. There were no complications. There was a significant decrease in major FI episodes. Soiling and ability to postpone defecation improved significantly, and patients reported significant improvement in health status and quality of life.

2.4. Anal Fistula

The management of anal fistula continues to present a challenge to the colorectal surgeon and is a balance between eradicating the fistula and maintaining anal continence. Traditional surgical techniques such as fistulotomy and seton technique sever the internal anal sphincters and may damage the external sphincter. The use of a seton has a recurrence rate of 8% and minor and major incontinence is 34 - 64% and 2% - 26% respectively.

The new PDM plug (Porcine Dermal Matrix plug) is innovative in both material and design. The collagen matrix, non-cross-linked, is obtained through a deantigenation process which preserves the integrity of the native proteins and acts as a natural scaffold for the development and the regeneration of new tissue, promoting remodeling without slowing down the timescale of physiological turnover.

The design of the plug (wedge-shaped with sharp edges; patent pending) neutralizes the forces of axial displacement and rotation. The solid body, non-collapsible, allows close contact with the fistulous tract. The close contact with the vascularized tissue and primary stability obtained through the "press-fit" positioning aim to ensure the incorporation of biomaterial (5).

Complex fistulas are very challenging for the surgeon because of the high incidence of continence impairment after these traditional surgical approaches. Video-Assisted Anal Fistula Treatment (VAAFT) is a novel minimally-invasive and sphincter-saving technique for treating complex fistulas. The aim of this report is to describe the procedural steps and preliminary results of VAAFT. Karl Storz Video Equipment is used. Key steps are visualization of the fistula tract using the fistuloscope, correct localization of the internal fistula opening under direct vision, endoscopic treatment of the fistula and closure of the internal opening using a stapler or cutaneous-mucosal flap. Diagnostic fistuloscopy under irrigation is followed by an operative phase of fulguration of the fistula tract, closure of the internal opening and suture reinforcement with cyanoacrylate (6).

2.5. Epistemology and Ethics

The congress also dealt with Epistemology and Ethics in colorectal surgery, analyzing the roots of our knowledge

in this field and, in particular the evidence based medicine (EBM) and its practical applications in the correct treatment of some proctologic condition.

The word Epistemology comes from the Greek word Episteme (From Epi- Histomai: "being above") that means "knowledge". Thus epistemology is related to the principles of our knowledge, i.e. how we know (what we know, what we think to know, what we do not know). "Ethics" is also a term with Greek origins, from the word Ethos that means "behaviour" and it derives from the Sanskrit Svadha: "what is established for ourselves", "personal way", "fate", "and destiny" (from the Indo-European roots -Dha: "what is established" and Sva-: "Self").

Therefore, ethics is the "science" concerning the right behaviour.

If we speak of Medical Ethics we can find, from Hippocratic times, that the primary goals of medical practice have always been defined in terms of benefit for individual patients and therefore, medical epistemology concerns the most appropriate knowledge (methods) to pursue the benefit for individual patients.

We can divide the medical knowledge in to implicit and explicit. The former one is made of education/literacy, experience, mastery/expertise, clinical judgment; while the latter is what is (temporarily) established by the basic sciences (physics, biochemistry, molecular sciences, anatomy pathophysiology) or from the clinical researches (literature clinical epidemiology EBM).

As the philosopher Michael Polanyi stated: "Implicit knowledge refers to the taken-for-granted knowledge at the periphery of attention that allows people to understand the world and discern meaning in it" (7).

All human knowledge has a practical dimension rooted in the accretions of experience and memory. Humans can obtain knowledge only by interacting with their environments, so any knowledge that humans can use necessarily has both tacit and explicit components. The sum of the implicit and the explicit knowledge describes how we know the reality. Another Philosopher, W.V. Quine, created the metaphor of the "web of belief".

The totality of our beliefs is like a web. Those sentences that lie closest to the periphery of the web are the "observation sentences", while the interior of the web contains more theoretical claims. "Our statements about the external world face the tribunal of sense experience not individually but only as a corporate body. Thus our theories are put to the test as a whole; we cannot simply test individual claims in isolation from the rest of our theory" (8). This approach shows a tendency to consider medicine as if it was a hard science, what it is not, for the human being; in its interactions with the environment and the pathogenic and salutogenic factors are a complex adaptive system.

In fact the term "evidence-based medicine" is defined in an overly broad manner as "The conscientious, explicit and judicious use of current best evidence in mak-

ing decisions about the care of individual patients" (9), or "The best findings from health care research that are both valid and ready for clinical application" (10), just to enumerate two of the most common definitions. These definitions seem merely to say that EBM is the wise use of the best evidence available, but who could possibly be opposed to using the best evidence wisely? (11) This epistemological vagueness claims that EBM is the most effective means of pursuing health. This claim implicitly embeds the moral imperative that EBM rather than medicine-as-usual, should be the main method of pursuing health (12). Since it postulates that research data are generated by EBM-preferred methods, they are unlikely to reflect biases.

In spite of this confidence in the EBM determinism, it is possible to find several biases in the assessment of what is "evidence based":

1) Sources of research funding

Studies of interventions that are likely to have commercial value are more likely to receive funding from the businesses. Moreover, data created by commercial funders are more likely to demonstrate the effectiveness of the sponsored intervention (13) (not mentioning conflicts of interest, bribery/sponsoring, etc.).

2) Technical Bias

Technical bias can skew the total pool of evidence in favour of interventions that are easy to investigate or amenable to quantification, and away from interventions or practices that do not easily fit into the EBM conception. Technical bias creates a systematic bias that influences what kinds of data are created. Evidence hierarchy privileges certain types of data and certain types of research methodologies (14).

3) Publication Biases

Publication bias refers to the differential publication by medical journals of positive and/or statistically significant results. Because publications count significantly towards researchers' career advancement, they may choose to study a restricted group of topics that are most likely to yield publishable results (15).

Moreover, in surgery we can find some other important bias, like the impossibility of double-blind studies, surgical technique preferences and the Surgeons' skill/expertise (nobody can reasonably say that all the surgeons are the same).

Analyzing the corpus of evidences from several meta-analysis on the treatment of different proctologic (i.e. Haemorrhoids and fistulas), we can reasonably establish that we cannot find any kind of such strong evidences that can justify the EBM method as the best one to guide the physician to discern the best guidelines of treatment for the above mentioned diseases.

3. Recommendation for Future Research

Colorectal diseases such as Fistula, Haemorrhoid and

Incontinence are common and because of the refractory cases, especially in the case of Fistula, we have to find the efficient treatments. It needs more time and more researches should be done. Definitely, modern facilities and ongoing support of Razavi Hospital can help the surgeons and researches to develop the new techniques.

Acknowledgements

We appreciate all people who help us to hold the congress, such as the speakers and Razavi Hospital staff.

Authors' Contribution

The study includes the congress presentations of all authors.

Financial Disclosure

There are no financial interests related to the material in the manuscript.

Funding Support

This study had no financial support.

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