Radiofrequency Coagulation: A Treatment Alternative In The Early Stages Of Hemorrhoids

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Abstract

Piles or hemorrhoids are very common pathology found throughout the world. It affects both sexes equally and although seen more commonly in adults and elderly, it does not spare the children too.

Having a complex and controversial state of origin, with different stages and positions of piles, no single mode of therapy has been proved to be a total success. Many different modalities of treatment have been put forward in accordance with advances in the field of surgery and biomedics.

Recently, we have carried out a new way of treating hemorrhoids by radio frequency coagulation.

Radio surgery uses a very high frequency radio wave of 3.8MHz, a plastic covered ground plate or antenna, and a 'patient electrode' attached with a ball over it, which is held by the operating surgeon. The electrode needs to be in close contact with the operational site, which results in release of energy, which produces coagulation within the tissue, which occurs as a result of heat produced by the tissue resistance to the passage of high frequency wave. The heat makes the intracellular water boil, increasing the cell inner pressure to the point of breaking it from inside to outside. This phenomenon is called as cellular volatilization.

THE RADIO SURGICAL UNIT

The unit comprises of a transformer to change the main voltage of 220 AC to high voltage and high frequency. Filtering and rectification to produce 4 different waveform of which the partially rectified modulated mode has been found suitable for coagulation then further modify this high frequency current.

Figure 1

Figure 1: Radio Surgical Unit

AIM

In the present study, the effects of radio frequency coagulation on patients with piles were observed during a 9-12 months follow up. In all, 105 patients were treated with radio frequency [hereafter will be called as RF].

There were 90males and 15 female patients. In all the above patients, no anesthesia was given.

DIAGNOSIS OF PILES

The diagnosis of hemorrhoids was made by per rectal and proctoscopic examination and only patients with 1st and 2nd degree internal piles were selected. They complained of bleeding with minimum or no pain.

PROCEDURE

Two tablets of Bisacodyl were given the night prior to the procedure and the patients were requested to have an empty stomach next morning.

After confirming the clarity of the bowel, a generous amount of 5% xylocain ointment was applied in the anal canal. Keeping the patient in the lithotomy position, a proctoscope was passed gently and the whole anal canal viewed to locate the piles. The pile masses were touched with a special gun handle of the instrument attached with a long ball electrode till shrinkage of the piles was seen. The mass turns white due to coagulation. All the piles were treated in the same session.

Mild laxative and analgesics were prescribed along with a hot hipbath for 1 month.

The patients were allowed to go home immediately and could resume their duties the very next day.

OBSERVATIONS

4 patients were below the age of 20 yrs, 74 between 20-40 yrs and 27 were above 40 yrs.

18 were having 1st degree of piles.

87 were with 2nd degree of piles where the pile used to prolapse during defecation and pulled back spontaneously after the act.

RESULTS

The patients were followed up from 9 months to 12months after the procedure and the effects were examined under the following headings.

BLEEDING

14 patients had recurrence of bleeding during the observation period. Only one had a very heavy bleeding needing some other restorative procedure.

The incidence of bleeding in different stages of piles were as follows:

- 1st degree- 3 patients.
- 2nd degree- 11 patients.

In 12 of the above patients, the procedure was repeated after which all were satisfied and comfortable.

PROLAPSE

No patient complained of bleeding after the procedure.

PAIN

Some patients complained of some amount of discomfort for the first 48 hrs. No analgesics were given.

RETENTION OF URINE

Only one patient had retention of urine. But he was 74 yrs of age and had enlarged prostate.

SEPSIS

No sepsis was found in any patient.

DISCUSSION

The RF has many advantages in the treatment of piles.

- It is safe. There is no risk of overheating, irradiation or explosion. It works on low voltage. The coagulation time is usually between 5 to 10 seconds.
- It is simple, rapid and exact.
- Can be used as office procedure.
- It is comparatively cheaper needing no disposables or costly medications.
- Pregnancy is not a contraindication.
- It is safe, easy and comfortable procedures were 95% of cases could be treated without any anesthesia.
- It needs repetition but it is again quick and safe.
- As against Laser or electrocoagulation, injury to

bone or periosteum is unknown.

A long-term follow up is needed to assess the longlivity of the relief and development of side effects.

Continued work in this area should provide exciting new dimensions in the management of hemorrhoids regardless of the cause.

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References

1. Pearch J.A Electrosurgery . New York.John Wiley and Sons: 1986.
2. Pfenninger JL,DeWitt DE. Radiofrequency surgery.Procedures for primary care physicians.St.Louis: Mosby,1994;91-101.
3. Sebben J.Electrosurgery: High frequency modulations.J Dermatol surg ncol.1998;14:367-371.
4. White WF. Radio-surgery- an advancement over the scalpel in many procedures. Podiatr.Prod.Rep,1986;3-16.

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