The value of cervical cryosurgery in the outpatient clinic

by
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Cervical cryosurgery is a popular treatment for cervical erosions in America and the United Kingdom. It has the advantages that it can be performed in the outpatient clinic and that it requires no anaesthesia. A limited area of tissue is destroyed around the tip of the probe as shown in Figs. 1 and 2. While the methodology and side effects are well documented, cure rates are harder to measure. Many have previously described high cure rates in the early months after treatment ([1,2,3,4]) but few have commented on longer term cures. We investigated therefore all the patients attending our clinic for one year who were treated wich cervical cryosurgery to assess both the short and long term effectiveness of the therapy.

MATERIALS AND METHODS

Two hundred and seventy patients with a cervical erosion were treated by cryosurgery. Most of the women were complaining of vaginal discharge, while a few had postcoital bleeding or infertility. Those with bacteriological or fungal infection were treated appropriately and all had a cervical smear taken; positive cytology was managed by surgical conization.

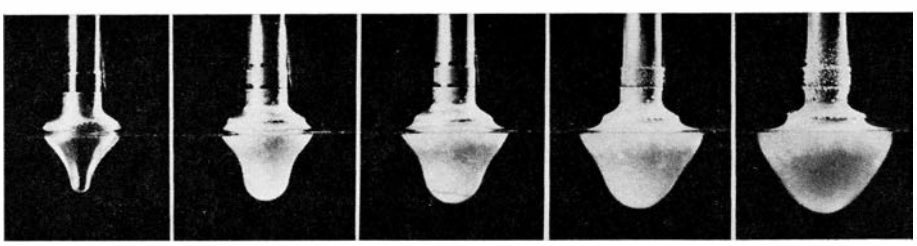

FIG. 1 - A Cryosurgery proble is dipped in an 0.2% suspension of agar. Photographs at 20 second intervals show the build up of freezing. This would be slower in the cervical tissues because of the blood flow warming the area.

After positioning the patient on the couch, the procedure was explained to her emphasizing the lack of pain. The cervix was exposed with a speculum and a handheld, palletted cryoprobe placed in the external os (Fig. 3). Fifteen seconds after the gas flow was started, the probe was firmly adherent to the cervix and

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Clinical Experimental Obst. & Gynecology
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care was taken not to touch the vaginal walls with the edges of the probe (Fig. 4). The duration of the treatment was 90-120 seconds, the surface temperature dropping to – 50° C so destroying the underlying tissue to a depth of 2-3 mm. At the end of the procedure, a rewarming coil in the tip of the probe melted the surface layers and allowed easy separation. A clean, shallow cone of the resulted (Fig. 5).

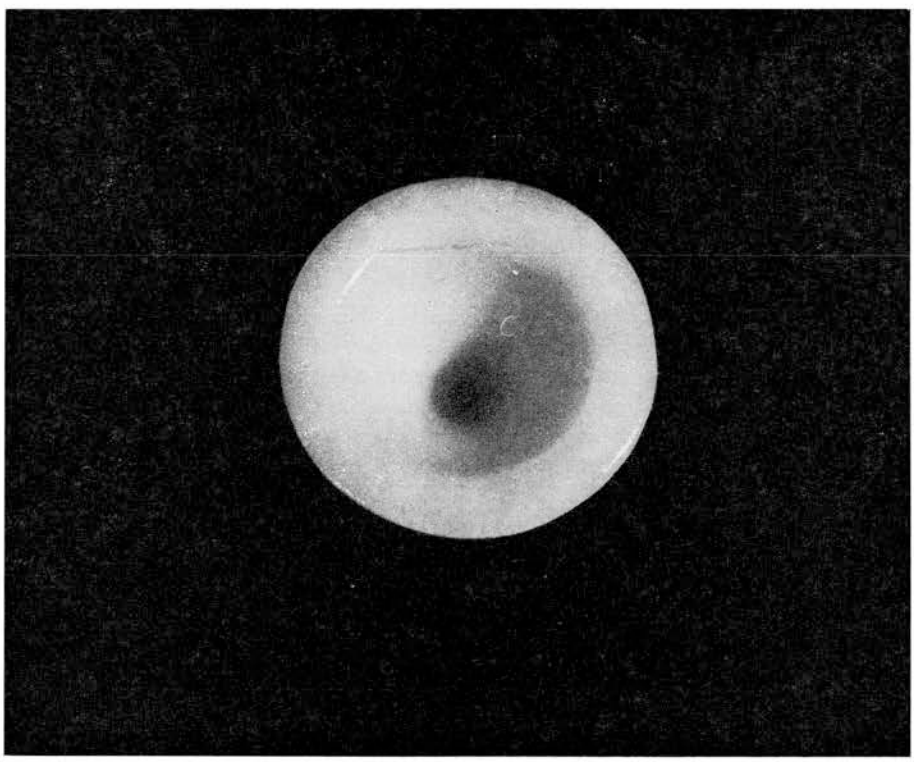

FIG. 2 - The ice cap produced after a two minute freeze.

Of the 270 patients, 232 had one treatment only, 34 had two and 4 required a third treatment. In effect a bloodless conization of the cervix was performed in a painless fashion. The whole procedure rarely took more than four minutes and our series was performed in the course of the ordinary gynaecological outpatient clinic.

The side effects and short term results were assessed six weeks after completion of treatment by examination at a follow-up clinic which 232 of the patients attended. The longer term effectiveness of the treatment was investigated subjectively by sending each patient a questionnaire 12 to 18 months after treatment. This was a multiple choice system with graded answers allowing the patient to reply about their symptoms with specific enquiry about vaginal discharge and the effects of the treatment on menstruation. One hundred and forty three women completed this questionnaire, commenting on their symptoms.

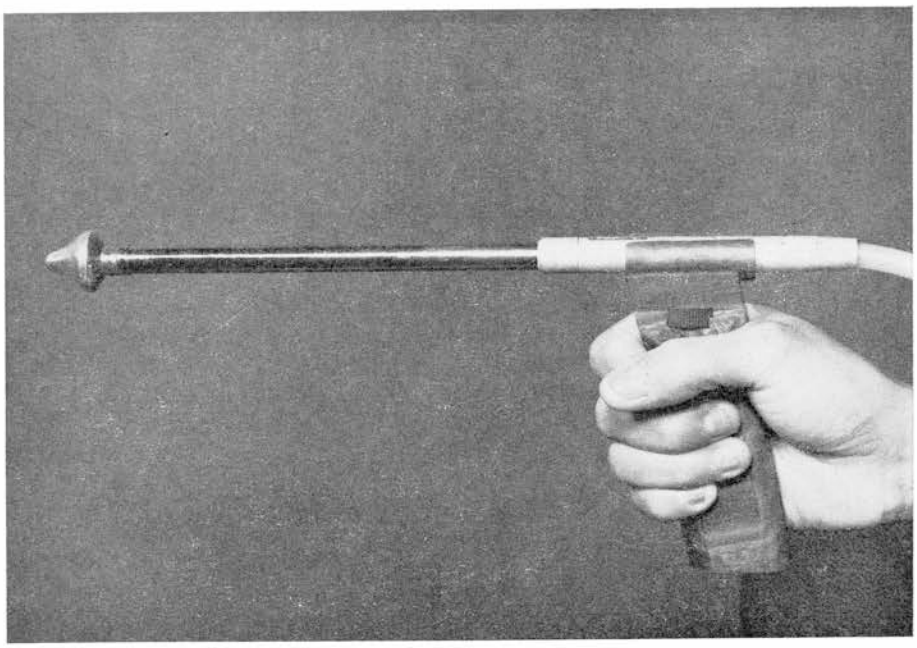

FIG. 3 - A hand held cryoproble with a palletted tip suitable for use with the uterine cervix.

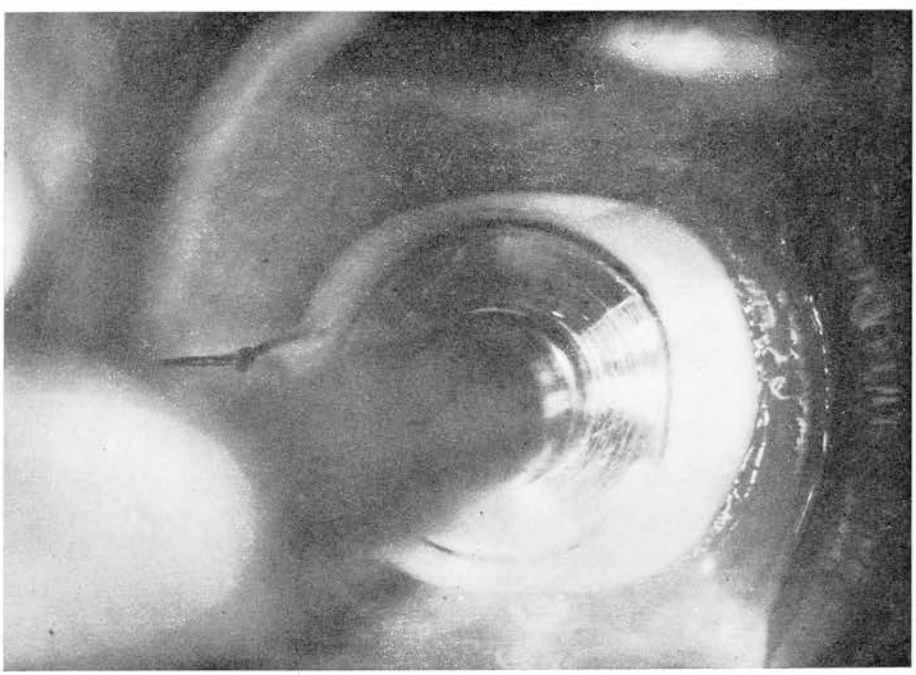

FIG. 4 - A sharply defined cone of cervical tissue is frozen.

Clinical Experimental Obst. & Gynecology
Vol. III, 1-4, 1976 pp. 5-10

RESULTS

Side Effects

Three side effects were associated with the treatment:

1. Pain - Only three patients had so much pain at the time of treatment that the operator had to stop freezing the cervix. These women had all been treated in the earlier part of the year when a rather more pointed probe than shown in Fig. 3 was being used and this passed further up the cervical canal. Twenty-one other women had a dull dysmenorrhoea-like ache during or immediately after therapy but this was not enough to stop the treatment. There were no reports of pain lasting more than half an hour after treatment.
2. Discharge - Virtually every patient reported a profuse watery discharge starting a few hours after cryosurgery and going on for two or three weeks. Usually it was enough to make the patient wear an external pad, but rarely did the discharge become irritant or offensive. If patients were warned beforehand of this side effect, precautions could be taken and the nuisance was reduced.
3. Bleeding - Postoperative bleeding was not a problem in the immediate days after treatment, occurring in six women only. However, 10 of the first 130 patients had post-coital bleeding within two weeks of cryosurgery. Since then we have advised patients to avoid intercourse in the first fortnight after cryosurgery and no further trouble has been reported. Further, the use of internal tampons was associated with a heavier first menstrual period after treatment.

Short Term Results

Six weeks after completion of treatment, 232 patients were examined and the results summarised in Table 1. In 172 (73.1%) the cervix was completely healed, in 49 (21.1%) it was almost healed and only 11 (4.7%) still head a significant erosion.

Table 1 - *Objective assessment of cure*

Lesion completely healed	172	94.2%
Lesion almost healed	49	
Lesion not improved	11	
	232	

Long Term Results

One hundred and fifty-nine patients replied to the questionnaire. Fifty (32%) considered their presenting symptoms were cured and a further 63 (40%) reported that they were improved following the therapy. The commonest single symptom in this group was vaginal discharge; of the 80 patients who presented with this symptom 23 (29%) were cured of their discharge and 38 (48%) had an improvement, similar proportions to those in the total group. None of the 80 women found that their discharge was worse after treatment.

Table 2 - *Subjective assessment of cure*

Symptoms cured	50	72%
Symptoms improved	63	
Symptoms unrelieved	30	
No comment on symptoms	16	
	159	

Twelve women (7%) considered that their periods were more painful than before treatment, 31 (19%) thought they had heavier period, while 29 (18%) had longer periods. Seventeen patients (11%) reported intermenstrual bleeding.

After cervical cryosurgery, some gynaecologists have doubts about the capacity of the cervix to dilate in any subsequent pregnancy. However, in contrast to heat, freezing destruction of tissues is not associated with much fibrosis and there is rarely evidence of fibrous scar formation at the site of cryosurgery. Of the 159 patients followed up for a least a year, 18 reported pregnancies. Two aborted, at 8 and 16 weeks, whilst the rest had uncomplicated vaginal deliveries. This series is small but no patients showed evidence of cervical fibrosis in labour.

DISCUSSION AND CONCLUSION

Cervical erosions are very commonly found at vaginal examination. Some are small and resolve spontaneously, particularly those coming soon after pregnancy or while the woman is using oral contraception. A few more persistent lesions may produce thick mucus which causes an annoying discharge and may act as a culture medium for pathogens. The best treament of these is the destruction of

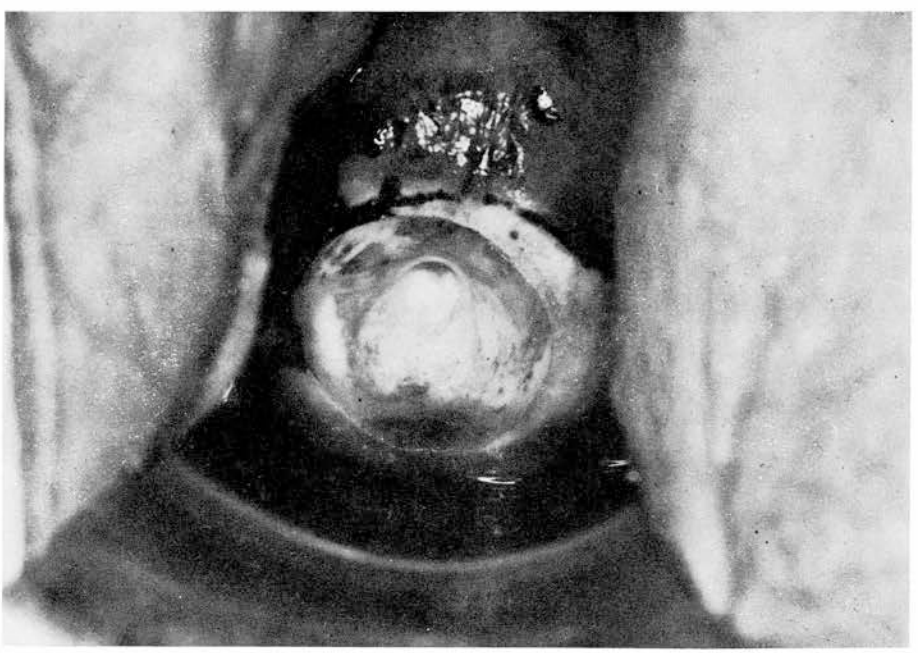

FIG. 5 - After freezing is over, a cleanly coned out cervix can be seen.

Clinical Experimental Obst. & Gynecology
Vol. III, 1-4, 1976 pp. 5-10

affected tissues by heating or freezing the area. Both methods destroy the lesion, but to use sufficient heat to treat a deep erosion properly is painful. Further, it is accompanied by unpleasant smoke and smell. For these reasons, the less painful and more acceptable method of cryosurgery is being employed very much more frequently on the conscious patient but assessment of cure has lagged behind this increased usage.

We have shown that cryosurgery is an acceptable method of treament for the conscious patient and it is associated with the healing of benign cervical lesions. The only constant adverse side-effect is the profuse discharge for a few weeks after treatment. An objective assessment showed that 95% of the lesions were improved within six weeks of treatment, much more than the chance spontaneous cure rate over a six week period. This is in accordance with other series published ([1,4,5]). Long-term follow-up is more difficult to assess as women vary in what they regard as normal, but over two-thirds of those followed up reported that cured or improved by the therapy; since these women had presented themselves with certain symptoms and now felt they were improved, this is another measure of a « cure rate ».

There are few treatments in medicine which for a small outlay of time and money can approach an objective improvement of 95% and one of 72% reported subjectively. To this is added the convenience to the patient of avoiding hospital admission, the safety of avoiding general anaesthesia and the acceptibility of the method.

Cryosurgery is a very useful treatment of benign cervical lesions both in the short and long term.

SUMMARY

Cryosurgery was used as out-patient therapy for 270 women with simple cervical erosions. It proved acceptable to both patients and physicians, with a short term improvement rate of 95%. A longer term assessment showed that 72% of the patients considered themselves cured. The method is an effective and painless treatment of a common gynaecological lesion which can be used in the clinic so saving time the patient having a general anaesthetic or being admitted to hospital.

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