FEMALE STERILIZATION WITH MULTIPURPOSE LIGHTED SPECULUM

by

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During the last fifteen years our Government has been rightly emphasising the Family Planning program for social and national interest. Various methods for family planning have been advocated; some of them have had temporary setbacks, but most of them have their places in properly selected cases even today. For the couples having the desired number of children, sterilization of one of the partners is the ideal method. This so called desired number of children and their sexes is variable. As gynaecologists most of us have come across problems of the complications of female sterilization, not the medical or surgical but social and psychological and which are sometimes very difficult to solve.

Tubectomies are done on a very large scale in our country. A number of camps are organised by the Government and social organizations for tubal ligation and the response is very satisfactory. In all the tubectomy camps and some of the smaller hospitals where tubectomies are done, the lighting is often inadequate and unsatisfactory for various reasons. The surgeon has to operate with minimal and inadequate light besides other handicaps. To overcome this difficulty the author has designed an instrument which gives very good exposure and light at the site. As shown in the accompanying photograph, it is a handle of the laryingoscope type with a detachable speculum carrying a bulb at the distal end. This position of the bulb gives proper light at the site of work.

This multipurpose lighted speculum can be used for, abdominal sterilization. vaginal sterilization, loop insertion and routine vaginal examination.

Abdominal Sterilization

After opening the abdomen the lighted speculum is introduced through the small incision and used as a retractor for the abdominal wall of one side at first, then the other. It lights up the inside of the abdominal cavity and the fallopian tube can be easily seen and picked up and brought into the wound with a Babcock forceps and dealt with by ligation or division as desired. The lighted abdominal cavity facilitates the identification and picking up of the tube with minimal handling of the inside organs.

Vaginal Sterilization

Vaginal sterilizations are done by various gynaecologists by different techniques. Seth in 1968, Purandare in 1970, Lahiri & Mitra in 1972 and the author herself in 1970 have published their series of vaginal sterilizations. Lahiri and Mitra advocated local anaesthesia with face down position, with legs hanging down and exaggerated Trendelenberg position. Author feels spinal anaesthesia with the usual lithotomy position is the best for vaginal sterilization. The crux of this ope-

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ration is the localization of the tubes. It is safer to open the pouch of Douglas between two Allies forceps in the posterior fornix. After opening the pouch of Douglas, different techniques have been employed to locate the tubes. Fort & Alexander in 1966, stated that the easiest method is to put a uterine sound into the uterine cavity and swing the body of the uterus to one side bringing the adnexa of the opposite side into view. Purandare in 1970 also used the uterine sound for the same purpose. Dawn advocates puting in two fingers into the pouch of Douglas to hook the tubes aided by abdominal pressure with the other hand. In the author's technique very little manipulation is required when using the lighted speculum. Over eighty vaginal and abdominal sterilizations have been done with this instrument.

Technique

The speculum is introduced into the pouch of Douglas through a small incision in the posterior fornix, with the handle towards the pubes; the speculum lifts the body of the uterus to one side and the ovary and tube of the opposite side drop down into the field, which is very adequately retracted and illuminated. The tube is picked up with a long nontoothed forceps and then with a Babcock and brought into the vagina and dealt with as desired, ligation or ligation and excision or cauterization or clipping. This gives such a good illumination and retraction that the whole procedure can be completed in a few minutes. By rotating the speculum to the other side the other Fallopian tube and ovary come down and are dealt with. It is imperative to mop up all the blood in the pouch of Douglas and the wound before closing the peritoneum and vaginal mucous membrane. Failure to take this precaution has repelled some of the gynaecologists from this approach, because of post operative infection, pain and adhesions.

Vaginal operation or internal approach as it is called, with no visible scar (from the patients point of view) can be done as an operation of choice 8 to 10 weeks after delivery or at any time thereafter. Proper selection of cases is essential, lest we land in difficulty at operation and have postoperative complications and morbidity. Selection of cases has already been described in my article of vaginal sterilization. The operation may be done under any suitable anaesthesia according to the preference of the surgeon. But spinal anaesthesia is ideal for the camps as it gives complete relaxation, there is no pain or pushing down of the intestines and the next patient can be kept ready while the present one is nearing completion, thus saving time.

The operation is best done after the menstrual period, but before the mid cycle, lest the uterus is already impregnated and you get the discredit. In many cases the interval operation is preferred, because the mother's condition may not be satisfactory after delivery, but more so because of the high perinatal and neonatal death rate, the foetal survival is not definite. Many people, both the gynaecologists and the patients have regretted where the last born and the only son, after two or more daughters has expired soon after the operation; possibly the operation was done at the persistance of the couple. The only disadvantage of the interval operation is, the party may not turn up at the suggested time and get pregnant again and come to request for evacuation.

Loop Insertion

In the absence of proper lighting the speculum gives proper vaginal illumina-

tion and retraction for the insertion of loop either in a clinic, a hospital or a camp.

Routine Vaginal Examination

The handle of the instrument gives a good leverage and the vaginal cavity can be easily and thoroughly examined with the light in situ. It does away with a nurse or an assistant focussing the light. It is ideal for domiciliary visit. Left lateral position is recommended.

Sterilization of the Instrument

Quick and easy sterilization of the instrument is a must, specially for the camps. The detachable speculum can be boiled after removing the bulb which is sterilized in Savlon or such other sterilizing liquids as in the case of cystoscope. For the camps it is necessary to have many bulbs. The handle is held in an autoclaved cloth bag with a purse string arrangement at the junction with the speculum.

Summary

A multipurpose lighted speculum has been described with its uses, and method of sterilization. Vaginal sterilization done by experienced gynaecologists is an easy procedure in properly selected cases, specially if done with this instrument and with the technique described.

This instrument has been designed by the author and is being manufactured by Surgical Instrument dealers at Bombay

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See Fig. on Art Paper I