

## A Clamp Forceps for Controlling Hæmorrhage when Performing Myomectomy.

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DURING the performance of myomectomy it is most desirable for the surgeon to be able to control the very free bleeding which often accompanies the enucleation or enucleations, and it is essential when very large and highly vascularized tumours are being thus dealt with because after their removal the redundant uterine wall has to be trimmed down and the uterus, so to speak, reconstructed, and this is a proceeding which, to be done well, requires deliberation and an absence of hurry. The profuse and intimidating gush of blood which follows an incision through the capsule of a large nævoid fibroid may cause immediate abandonment of the attempt to save the uterus or, if it be persisted in, the continual bleeding from a hundred points on the raw surfaces so disconcerts, daunts and hurries the surgeon that the paring is insufficiently carried out and the suturing inaccurately and roughly done so that a much too large and badly reconstructed uterus is returned to the abdomen. When I began to do myomectomy on an extensive scale I underwent a good many of these trials, endeavouring by speed in operating to minimize a blood loss which was entirely due to my faulty technique. Presently I took to placing clamps temporarily on the ovario-pelvic folds and then on all four of the main vessels supplying the uterus, getting at the uterine arteries by deliberately exposing them before beginning to enucleate. It is, however, not always easy to compress efficiently the uterine artery by means of forceps, for the vessel tends to slip out of the jaws and leaves the veins alone compressed which makes the bleeding worse; moreover the vessels themselves are with difficulty accessible in some cases.

I therefore devised the clamp forceps shown in fig. 1, the grip of which is so arranged as practically to encircle the uterus at the junction of cervix and body and act as a tourniquet in controlling both uterine arteries at once. In passing I may remark that I found that the cervix was a very much smaller thing than I took it to be and that to exercise sufficient pressure to compress the uterine arteries the jaws of the forceps had to close together much closer than I had anticipated.



This clamp when properly applied, and with ring forceps compressing the ovarian arteries as they run in the ovario-pelvic ligaments on each side, so completely controls the circulation through the uterus that the operation of myomectomy becomes nearly bloodless, much easier and, in formidable cases, immeasurably safer. It should not be taken off until the reconstruction and suturing of the uterus as recently described by me in this Journal \* is entirely finished. On removing it the uterus swells up visibly and probably a few oozing points will appear along the suture line. These can be checked at once by under-running them with mattress-sutures.

Possession of a means of controlling the bleeding in myomectomy is an immense gain and at once "writes off" the chief difficulty and drawback of the operation, and should the operator after enucleating and endeavouring to reconstruct the uterus decide that he cannot achieve a satisfactory result he can proceed to carry out hysterectomy with the patient none the worse for his praiseworthy attempt. As an example of the command this clamp gives the surgeon I may mention a woman of 30 years of age from whose uterus I enucleated a solitary nævoid myoma the size of an eight months' pregnancy deeply imbedded in the posterior wall. The uterus was intensely vascularized and I performed the "hood" operation described by me without the loss of a tablespoonful of blood after the initial escape of that contained within the uterus although the operation lasted nearly an hour and a half.

The clamp should be applied as high up the uterus as the situation of the tumour will permit. There is a tendency to put it on too low so that it compresses the cervix *below* the point of entrance of the uterine arteries, which then escape compression. When all four arteries are compressed the uterus can be seen to become paler in colour.

If on making the first incision through the uterine wall any spouting vessels are seen the clamp is wrongly adjusted and should be taken off and reapplied.

In the case of a cervical fibroid or a fibroid verging on that zone it may be necessary first to enucleate partially the lower pole of the tumour before putting on the clamp.

If the cervix and lower segment are very narrow, it may be necessary to slip a piece of india-rubber tubing over each jaw of the clamp, so as to increase its gripping power.

\* "The Modern Scope and Technique of Myomectomy," *Journal of Obstetrics and Gynecology*, vol. 29, No. 4, p. 591.