

rent through the tumor day and night, and thus procure the electrolysis of the largest tumor in the course of a few days. As far as electrolysis is concerned 10 milliamperes during 100 minutes would be as effective as 100 milliamperes during 10 minutes. I have devised a plan by which a small battery is placed under the bed and the current is carried to the front and back of the tumor, but I have not yet been able to give this method an extended trial.

What about galvano punctures? Although my experience with them has been limited, I have seen enough of them to be able to say that the seldomer they have to be resorted to the better, and then only at the patient's home or at the hospital, but, with one exception, never at the office. First of all, because they are exceedingly painful, and, second, because the after condition of the patient is such as to cause considerable anxiety. In the case of Mrs. D. I tried galvano punctures many times before I was able to pass the sound, and I found that anything more than 30 milliamperes could not be borne for more than a minute or two. I also tried them many times in the case of Mrs. T., who was unable to bear more than 20 milliamperes without an anaesthetic. Besides the pain caused by the activity of the current being concentrated on so small a surface as the point of a trocar (for the electro-chemical action is always in direct proportion to the size of surface for a given milliamperage), there must also be taken into account the suffering caused by piercing the vagina and the sometimes very sensitive tumor itself. In many cases the patient cannot bear to have her tumor touched far less to have the trocar thrust into it. In any case, when a puncture is to be made it is well to have the tumor steadied by a firm hand on the abdominal wall to press it down towards the trocar. Even when an anaesthetic is employed and a sufficiently high current is turned on, say of 200 milliamperes for five minutes, powerful contractions of the intestines are set up, which continue long afterwards, amounting in some cases to torminae. These may be diminished, but not entirely avoided, by augmenting and decreasing the strength of the current very gradually and by administering a hypodermic of morphia previously. In the case of Mrs. T., who has an insuperable repugnance to the drug and refused to take it, these quivering pains were

terrible, and lasted for two days afterwards. By keeping the patient in bed for two days after the puncture and applying emollient applications to the abdomen and by giving antiseptic injections they are free from danger, and, in Apostoli's hands, are very successful.

Martin, of Chicago, never uses them, and I much prefer the intra-uterine applications, which are much safer and hardly at all painful. Some of my patients have frequently borne 250 milliamperes for five minutes without an anaesthetic. They are safer because they may generally be performed without causing the slightest lesion of the uterine mucous membrane. It is now a rare occurrence for me to draw one drop of blood when introducing the sound after the first application. But there is one case in which the intra-uterine applications are powerless, when the tumor lies altogether outside of the cone-shaped current, the apex of which is at the sound and the back at the clay. In three of my most obstinate cases all the morbid growth in the anterior wall of the uterus was absorbed, because I could feel the tip of the intra-uterine sound under my finger on the abdomen. In one of them, Madame D., I then began to place the clay electrode on the back, so as to take in the posterior half of the tumor between it and the sound, with the result that the posterior half of the tumor also rapidly disappeared. I think this observation, if correct, to be important, as it would explain why I and others have failed in certain cases to obtain absorption of the whole of the tumor.

As Mr. Tait and Dr. Bantock at a recent meeting of the British Gynecological Society made the statement that a fibroid tumor could not be electrolysed—that is, decomposed into its constituent elements by any amount of current which it was possible to bear, 200 milliamperes, for instance, for five minutes—I proceeded with my galvanometer and rheostat to an electroplating establishment and interposed them in the circuit while the process was going on, when to my surprise I found that two and a half milliamperes was the greatest strength they ever employed. In fact, a copper article was completely coated with silver in five minutes with a current of that strength, which, on being weighed, showed that an equivalent of two grains of cyanide had been decomposed. Now if two grains are decomposed by two and a half