

The parts should not be kept too warm, for warmth and moisture relax and take away the support of the scrotum from the dilated veins. Cold in the form of a douche to the genitals night and morning, solutions of muriate of ammonia, hamamelis, etc., have been used with benefit. The bowels should be kept open in order to avoid loading of the colon, and, if the general health is defective, tonics should be administered.

When these measures are ineffectual it becomes necessary to operate, as in the cases before us. There are two methods generally adopted by surgeons—the subcutaneous ligature, a plan first suggested and put into practice by Ricord, but so improved on by Dr. Keyes that it is known as Keyes' method; also the incision and ligature by what is known as the open method. I rarely employ the latter, and only when I fail after repeated efforts by the concealed ligature. I do not confine myself to Keyes' plan, but very often adopt the plan so long successfully practised by the late Dr. Agnew, of Philadelphia.

We are now prepared to operate. The scrotum is shaved, and made aseptic by careful washing and a sublimate douche. I now throw fifteen minims of a four-per-cent. solution of cocaine into the upper part of the scrotum in the field of the operation. I have here, as you see, two of Keyes' varicocele needles; one threaded with strong twisted silk, which is not very thick, but has been tested, and is capable of bearing all the strain necessary to very firmly constrict the veins. I find the vas deferens located in the posterior part of the cord, near the base of the attachment of the scrotum to the perineum, which can be easily recognized by its hardness to the touch, and the manner in which it jumps from under the thumb and finger when squeezed. I separate the vas deferens from the mass of veins, carrying it backward. With it is carried the artery. They are now resting on the ball of the finger and thumb, whilst the terminal portion of the finger firmly compresses the walls of the scrotum. Anterior to and close to the nails, I now introduce the threaded needle, passing it completely through both walls of the scrotum from front to back, and then leave it in the hands of the assistant. I now take the unthreaded needle and intro-

duce it at the same point as the first, and now that its point is well within the dartos it is carefully worked between the dartos and veins, and so passed around the mass. I make its point emerge at opening of exit made by the threaded needle. Now the thread is taken out of the eye of the first needle, and the second is threaded with it and the needle withdrawn. It is clear that the mass of veins is now encircled with the thread loop, which I simply tie with a single instead of the friction knot, and cut off both ends short. By separating the integument of the scrotum the entire loop becomes subcutaneous, and, if no germs have been carried in, the thread will become encapsuled, and no harm will result. It is not an infrequent practice with me to cut only one thread, leaving the other hanging out, which enables the loop to be removed in from ten to fifteen days; a plan which is very satisfactory, indeed, and, as a rule, the patient is better satisfied if the entire thread is removed in the course of a few days. The scrotum will be now washed with a sublimate solution and wrapped in gauze—iodoform or bichloride gauze will answer equally well. The patient is to be placed in bed, where he will remain for a couple of days, after which he can move about, and can resume his work in ten or twelve days.

I will now operate on the next patient by the plan of Dr. Agnew, one which I like myself very much. The scrotum is prepared as for the other operation, and the field injected with cocaine. I now take this steel pin, two and a half inches in length, having a large head, and thrust it through both walls of the scrotum from behind forward, of course taking the same precaution as I did in the first operation to isolate the vas deferens and artery. Now, with the Keyes needle threaded with a strong silk thread, which is carried through the eye of the needle to its centre, I enter the scrotum at the point of exit of the pin, and, when within the dartos, carry the point round over the veins and bring it out at the same point entered by the pin. I now pull forward the loop over my finger, and withdraw the needle, unthreading it. The loop is slipped over the head of the pin, and the free ends of the thread tied over the point and drawn tightly enough to compress the veins. The point of the pin is now snipped off