

drawn out the sac is to be twisted. Having been cut off along a straight line the peritoneum becomes folded upon itself, and screwed up and closed so tight that not even the point of a probe can be introduced."

As Halsted, writing in 1893, has well said, "With the exception of torsion of the sac, which we replace with suture, the operation for the radical cure of hernia in the time of the Roman emperors was quite on a par with the operation as usually performed in our day."

A few centuries later this operation had been abandoned.

Paul of Ægina in the seventh century, following in many points the methods of Celsus, introduced a new and radical step, viz., castration. Without attempting to separate the cord from the sac he transfixed the sac with a "large-sized needle containing a double thread." This thread was then cut, and the ends crossed like the great letter X, and tied. The portion below the ligature with the testis and cord were then cut away.

It seems difficult to understand how this method so inferior to the methods of Celsus and Heliodorus should have survived to modern times, while the former were so soon forgotten.

During the Middle Ages many methods were introduced. Castration was still performed, though according to William of Salicetus, only by travelling rupture curers and foolish physicians. Of the other methods the principal ones were:

1. Exposure of the sac and closure by various forms of ligature.
2. Inclusion of the sac and scrotum either by needles or by sutures.
3. Cauterization applied in various ways.

The cure by cautery was known by Paulus and was much employed by the Arabians. It continued in vogue almost to modern times. Full details of the method are found in the writings of Pott,* who thus describes it:

"After a proper time spent in fasting and purging, the patient must be put into an erect posture and by coughing or sneezing is to make the intestine project into the groin as much as possible, when the place and circumference of such projections are to be marked out in ink. Then the patient is placed on his back, the intestine is to be returned fairly into the belly and a red-hot cautery is applied according to the extent of the marked line. For this purpose cauterics of various sizes and shapes and figures have been devised."

Different writers differ widely as to the extent and depth of the cauterization, but as Pott adds: "In all of these the exfoliation of the bone is made a necessary part of the process. Eschars and sloughs being separated and the exfoliation cast off, the patient is ordered to observe an extremely careful regimen, to lie on his back during the cure and to wear a bandage for some time after-

* Vol. II., p. 177.