

tion will be accomplished without enlargement of the tendinous aperture and the consequent diminution of support; removal of the hernial sac will not be necessary, and any objectionable contents of the sac may be cleared and the condition of the gut accurately ascertained. Should it be necessary to make an artificial anus, the proper place will be the central incision.

By means of the abdominal section non-discovery of double strangulations and strangulation by the returned neck of the sac will be rendered impossible, and mistaken and incomplete operations will be obviated.

For the radical cure he advocates the following method: "Two common glover's needles armed with one piece of salmon silk worm gut are fastened in some convenient needle-holder at a very slight angle to one another, so that their points completely coincide, and can be made to enter through one hole in the skin. The left forefinger covers or occupies the inner aperture of the sac; the needles are made to enter from without, and are then separated. The outer needle is then made to dip deeply into the external column of the ring, and the inner needle similarly into the inner column. The needles are then pulled out through the central incision, and as many sutures as may be thought desirable are inserted in this way. When the insertion of the stitches is completed, they can be tied from within and cut short. The abdominal wound is then closed properly and the operation is over."

Mr. Tait states that he does not put this operation forward for the purpose of completely replacing the direct method, but maintains that it is applicable in a very large number of cases, and that in its uniform adaptability for the combination of the relief of strangulation and the radical cure of hernia will be found the chief argument for its adoption as far as it can be extended.

He has in this manner cured a large number of inguinal and crural hernias in women, but has never operated on a man, and suggests that in dealing with inguinal hernia in the male some device would require to be introduced to protect the spermatic cord.

The discussion on this paper was quite conservative in its tone, the danger of rupturing the gut and of introducing the irritating contents of the sac into the peritoneal cavity being particularly dwelt upon.

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## ONE STORY OF THE THERMOMETER AS RELATED TO ACCURATE MEDICAL OBSERVATION.

Dr. Weir Mitchell, in his address before the Congress of American Physicians and Surgeons, presents the story of the thermometer as he gleaned it from memoirs, journals, lay biographies, rare old folios, and forgotten essays. Between 1593 and 1597 Galileo invented the crude open thermometer. It was a tube of glass, open below and ending above in a bulb. This bulb being warmed, the open end of the tube was set in water, so that as the bulb cooled the water rose in the tube. Then any heat applied to the bulb caused the water to descend. It was an imperfect instrument, and does not seem to have been highly prized by Galileo himself. In 1613 a Venetian noble, Di Sagredo, divided the scale into one hundred divisions, and two years later hermetically sealed the tube, thus giving us the modern instrument. Yet physicians made use of the crude instrument of Galileo rather than the improved instrument of Sagredo. In 1646 Duke Ferdinand II. of Tuscany still farther improved it, and constructed divers forms for medical use. In 1710 another astronomer, Newton, marked the blood temperature at twelve degrees of this scale, and used linseed oil as the fluid. A little later Daniel Fahrenheit altered the scale, and at last set ninety-six degrees as the blood heat, and used the armpit temperature. Nearly a century of silence falls upon medical thermometry—a silence broken by a few aphorisms of Boerhaave and doubting sentences by Van Swieten. In 1340 George Hartine maintains that the heat in man varies from the heat in a fire in degree only, not in kind. He fixed the heat of the skin at 97.98, over or under. He made many correct observations as to the use of the thermometer, but they failed to be received owing to the prevailing erroneous views respecting heat. Physiologists and chemists continued at work, and in 1798 James Curry gave his researches to the public. But even this failed to exert much influence upon the profession. So that it was not until 1840, when the systematic work of Andral was followed by the classic of Wunderlich, that the true laws of temperature in disease became familiar to the profession.

Thus it is evident that the thermometer became of value only when the profession