

ments along this line are to be carefully conducted, but the method promises to be the simplest and most convenient for both surgeon and patient. Robert T. Morris, M. D., New York, in *St. Louis Med. and Surg. Journal*.

## THEORY AND PRACTICE OF SPINAL COCAINIZATION.

G. K. Dickinson, Jersey City, studies somewhat in detail the anatomy, physiology and practical application of this method of analgesia. Pure cocaine is safe in proper doses, and can be relied upon to have a uniform effect. The local effect begins at once and reaches its full intensity in a few minutes. This effect is the sole one until such time as the salt enters the circulation by the veins and produces its secondary systemic effect. The local effect is in from three to five minutes to produce a complete analgesia of the superficial nerve of that part of the body below the point of puncture. In five minutes more the deeper nerves are affected in the same way. As the primary analgesia extends upward it becomes surgically more uncertain, and though sometimes complete, cannot be counted upon. After twenty minutes have expired from the time of puncture systemic results may be expected. Being in the dose ordinarily used, one-half grain, a vasomotor stimulant, the skin blanches, the cerebrum becomes anemic, and vomiting results. The analgesia is progressive and at times irregular in primary manifestation, showing first in the pudencal region, at other times in the feet. Areas of analgesia coalesce until the complete effect is produced. Sometimes respiration is accelerated, but not sufficient to be noticed by the patient as a distress. The heat center is affected and by increased metabolism the temperature may rise from  $1^{\circ}$  to  $5^{\circ}$ . A fairly constant effect is a severe pain in the back and thigh, which comes on soon after the analgesic effect has worn off and persists for several hours. Before making the puncture, the skin of the back and loin should be prepared as carefully as before an abdominal operation, so that free manipulation of the back and a proper search for the spinous processes may be made. The spinous process is the guide, and if it is not rightly estimated as to its size or position of its lowermost point, the point of entrance will not be correctly located. The patient should sit well bowed forward with the bend at the lumbar region, and with the forefinger of the left hand supported by