coming under my observation is small, it is of interest to notice that of the seven cases the position was occiput anterior in four, with occiput posterior in only one, and the head lying in the transverse diameter of the pelvis in two. Before looking over the cases I had expected to find the position in the large majority occiput posterior. In 30% of the cases delivered with high forceps, for whatever cause, a constriction ring was found. This, probably, is too large a percentage.

The presence of a ring is an absolute indication for delivery. The earlier one operates, the less the mortality; therefore, if the cases are delivered while there is only a suspicion in the operator's mind of a ring, rather than an absolute certainty of it, the mortality should be nothing, as in the series of cases which I report.

In the reports which follow, it seems to me that the constriction rings were the primary cause of the slight amount of progress made rather than the result of some mechanical obstruction.

Mrs. P., thirty-three years. First pregnancy miscarried, two months and a half. Present pregnancy the second. Very nervous person. Spines 25 cm., crests 27, external conjugate 20. After about twelve hours of ineffectual pains, which were of short duration and of not much strength, etherized for delivery because of slight progress. Os size of fifty-cent piece. Hard to dilate. About two inches inside, a very definite, firm constriction ring about the baby's head, which was somewhat hard to dilate. Head found lying transverse. High forceps. Baby weighed 4 lb. 15 oz.

Mrs. T. First pregnancy. Spines 25 cm., crests 28, external conjugate 20. After about sixteen hours of labor, the progress was slow, although for the last few hours the pains were satisfactory. Etherized for delivery. Head found lying transverse. Occiput on the right. Slight constriction ring. High forceps. Nine-pound boy.

In both of these cases the head was found lying in the transverse diameter of the pelvis. It might be said that this faulty position furnished the mechanical obstruction to progress which in time became an etiological factor in the production of the ring. As I watched the cases, however, it seemed to me that probably had the uterus contracted properly, this position would have corrected itself, and that I happened to find the head transverse simply because rotation was not complete. In the first case the contractions had never been good, and in the second satisfactory but for only a short time.

Mrs. J. First pregnancy. Spines 25 cm., crests 28, external conjugate 20. Exceedingly nervous, hysterical patient. After twelve hours of labor mother began to show signs of fatigue. No progress for some time. Membranes found unruptured. Occiput posterior. About the neck a firm constriction ring. Hand could be forced through the ring only with difficulty. Forceps delivery. Baby weighed 7 lb.

Mrs. B., twenty-eight years, more or less. First pregnancy. Spines 22 cm., crests 27, external conjugate 20. For several days, at intervals, had labor pains lasting for some little time. Apparently real labor had each time begun but stopped usually at night. Finally, membranes ruptured spontaneously after two and a half hours of labor. Pains fairly good. Presenting

part low but os dilated only to a finger tip. At no time were the pains continuous and at no time very severe. After about ten hours of labor, during the latter part of which there was practically no progress, etherized and delivered with forceps, occiput being anterior. Very definite constriction ring found about the lower part of the face. Baby weighed about 7½ lb.

PAIN RELIEVED BY MANUAL THERAPY.

BY E. C. THOMPSON, M.D., BOSTON.

ONE of the most important points in the treatment of disease is the relief of pain, and it is most frequently this symptom that causes a patient to seek the aid of a physician. Very little is known of the actual causation of pain or of individual susceptibility. It varies in intensity, occasionally causing death, but we generally judge of its severity by the countenance, the attending functional disturbances and the word of the sufferer. We find many cases that show no lesion that will produce pain in spite of the most careful examination to discover any condition that will corroborate the patient's statement.

Pain may arise in any structure of the body, and may be roughly classified into inflammatory and non-inflammatory, and these may again be subdivided into functional, articular, vascular, nervous and mechanical. Many cases will show a combination of these causes, but as a rule it is not difficult to place any pain in one or other of the divisions just mentioned.

Now as to the different means of relieving pain (apart from surgical work), the following are the most common:

First, drugs internally, as morphine, etc.

Second, drugs externally, in lotions and liniments, etc.

Third, mechanical means, as water and electricity.

Fourth, manipulation.

It is this last form of treatment I wish to explain fully and show what results can be obtained from it, as most authors do not freely advocate or fully describe it in their works.

The subject is an old one, dating back from the earliest times of the ancient Greeks and Romans, who used the hands as a means of relieving the pain of a bruise, a strained tendon or a tired-out muscle. The old philosophers and founders of the art of medicine, including Hippocrates, Plato and Celsus, all advocated friction as a means to combat pain. But it is to the workers of more recent times that we owe our knowledge of to-day, viz., Sydenham, Grosvenor, Ling and Roth. These men were the founders of our present system of medical gymnastics, manual and physical therapy. During the latter part of the nineteenth century manual therapy was extensively practiced in Holland by Metzger; in Germany by Zabludowski, Mozengeil and Schieber; in England by Murrell, Eccles and Brunton; in the United States by Graham and Mitchell, and in Sweden by Nordstrom and Ostrom. In addition to these, numerous writers of to-day uphold the manual treatment

as well as the mechanical apparatus of Zander and others.

Dr. E. F. Cyriax, in the demonstration of Kellgren's manual treatment, has used manipulation and exercises more widely than any other physician. His treatment of typhoid, the eruptive fevers, whooping cough, diphtheria and cerebrospinal meningitis show certain favorable results and might at times be used to advantage. His methods are somewhat different from those used to-day, being confined chiefly to friction, vibration and postural exercises.

In taking a wide view of the subject, we find that manual therapy has at one time or another been used on every organ of the body and for nearly every disease, and that in many cases the beneficial results obtained far exceed those of any other form of treatment. In sprains, bruises and fractures manual treatment has proved its value, relieving the dull aching pain which usually accompanies these injuries. The cessation from pain is most marked, giving many hours of comfort, which cannot be obtained in any other way.

Acute multiple arthritis is a disease which lends itself most readily to massage in spite of what other writers may say in regard to forcing or driving the disease to other joints. Careful manipulation of the most swollen and tender joint beginning above the joint should very soon relieve the pain, lessen the swelling and allow the limb to be moved, whereas before the slightest movement would cause the most excruciating pain. This method can easily be demonstrated by taking the knee and ankle of one limb for treatment, while the other similarly affected is treated by the usual orthodox remedies. Here the value of massage is seen from the first application.

Gonorrheal arthritis in the same way can obtain great benefit from massage if the effusion is non-purulent and the joints to be operated on are carefully chosen.

Myalgia and lumbago should always receive massage from the first, and very often will need no other form of treatment. The myositic deposits so often found in these cases can be promptly removed by massage, relieving in a few treatments pain that may have existed for months or years.

The pain in neuritis, sciatica and in many of the neuralgias can at times receive great benefit from massage, but cases will be found to tax the ingenuity of the operator. In these some defect is usually to be found in the muscular or vascular systems, together with some limitation of joint or functional movement, which will be our guide as to the means to be employed.

The beneficial effects of massage in neurasthenia has been clearly shown by Dr. S. W. Mitchell and needs no further mention.

In addition to the above, the operator will be rewarded and very often agreeably surprised by the effects of massage for the relief of pain in frost-bite, intestinal colic, flat foot, cramps, erythema nodosum and locomotor ataxia.

It is impossible to describe on paper the different methods used to obtain the above results, as the manipulations vary in each case and require

to be altered and adapted according to the position and kind of pain and to the functional disability incurred.

The chief work falls on the thumb and finger tips, the palmar surface of the fingers and the thenar and hypothenar eminences. The movements (always concentric) vary from the lightest effleurage to the most thorough petrissage and tapotement, followed frequently by active, passive, assistive and resistive movements, or various combinations. All these manipulations should never cause any pain in their application, but should be followed by relief of pain or tension, and a general feeling of lightness and well being. On the other hand, too rough or violent manipulation will defeat the object in view and cause increased pain, bruising and general aggravation of existing symptoms.

Any case should receive the care and attention which would be given a surgical operation, such as preparation of the hands, condition of the skin surface to be treated, temperature of room, and position of patient.

The physiological facts evolved from massage are increased elimination, vascularity and metabolism, absorption of infiltrations and exudations; improved nutrition; relief of congestion and sedative effect on nervous system. In addition to these, adhesions are attenuated, stretched and sometimes broken down.

In conclusion, I would say that manual therapy should be much more extensively used, that it opens up a wide field of investigation, not only for the relief of pain, but for shortening the time required for treatment. Also as a means of increasing our knowledge of palpation, examination and investigation, and of giving relief in cases in which we may hitherto have failed.

REFERENCES.

- De Costa: Medical Diagnosis.
Butler: Diagnostics of Internal Medicine.
Graham, D.: Massage, 1902.
Palmer, M. D.: *Ibid.*, 1904.
Eccles, A. S.: *Ibid.*, 1895.
Dowse, T. S.: *Ibid.*, 1890.
Nordstrom, G.: *Ibid.*, 1896.
Murrell, Wm: Masso-Therapeutics, 1887.
Ostrom, K. W.: Massage, 1905.
Hood, Wharton: Injuries and Friction, 1903.
Cyriax, E. F.: Kellgren's Treatment, pp. 253-298, 1904.
Mitchell, J. K.: Physiologic Therapeutics, vol. vii, pp. 65, 1904.

Clinical Department.

TETANUS: SEAT OF INFECTION IN THE UTERUS.

BY F. W. JOHNSON, M.D.,

Gynecologist-in-Chief, Carney Hospital.

JAN. 23, 1910, Mrs. N. C., aged thirty-nine, mother of six children, entered the Carney Hospital. Eight days previous she aborted at five and one-half months. She said the fetus had been dead three months. Following the abortion there was profuse flowing for which, on two occasions, the family physician packed the vagina with sterile gauze. At home her surroundings were nothing less than filthy. During the night of Jan. 22, she experienced difficulty in swallowing. The next morning, Jan. 23, her jaws were locked. Soon rigidity of the muscles of the neck appeared.