same objections as to the Horsley method: too much brain compression and danger of hemorrhage. That these objections are not based upon visionary reasons is proved by the following case:

Mrs. W., 65 years of age, married, was operated on Oct. 23, 1893, by Dr. J. D. Griffith, of Kansas City, assisted by Dr. J. F. Binnie and myself. All went well until the attempt to raise the dura to expose the ganglion. Serious symptoms: depressed heart's action and irregular respiration then arose—necessitating repeated interruptions. Finally the petrous bone was well uncovered, but the bleeding was so excessive by the time the region of the ganglion was reached as to compel cessation of operation and the application of gauze pressure. After repeated efforts we were compelled to desist, tamponing the wound with iodoform gauze to prevent death from hemorrhage. Four days later the wound was unpacked and a second unsuccessful attempt made to remove the ganglion, during which the dura was penetrated. Again recourse to the gauze tampon was necessary to save life temporarily. The patient died three days later as a result of meningitis.

Now Dr. Griffith is one of the most careful surgeons in this country and I am sure no other operator could have accomplished what he failed to do in this particular case; and I feel equally certain that had the Rose method been adopted the ending might have been more favorable.

As a result of observation, therefore, as well as experimentation, I am compelled to say that the Rose operation for removal of the Gasserian ganglion appears to me to be the one easiest of execution and safest in practice.

ORIGINAL ARTICLES.

A REPORT OF FOUR ILLUSTRATIVE ABDOMINAL SECTIONS.

Read by title before the Southern Surgical and Gynecological Association, November, 1894.

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Clinical reports possess a peculiar value to practitioners of medicine as attesting the absolute results of treatment. The four cases here reported illustrate as many distinct and separate conditions of disease, in which none other than radical surgical treatment can avail. These cases occurred in my practice during one week; the four operations having been performed within six days. In all the cases the indications for operation were absolute and urgent; they passed into easy convalescence without untoward symptoms of any kind, and have made complete and perfect recovery. In Case 4 the operation was followed by pronounced shock, from which the patient rallied in a few hours. All are now in the enjoyment of perfect health three months after operation.

The object of this report is to illustrate the indications for operation in grave conditions of disease formerly imperfectly understood, and to demonstrate the safety of operative treatment, promptly and thoroughly applied. The profession has been slow to accept the practical truth that the risk of operating in such cases as I will report is incomparably less than that of temporizing by treating symptoms. Among the increased risks to life from delay, the feeble condition of the patient and the complications resulting from rapid tissue changes demand recognition. For convenience I will report the cases in reverse order, beginning with the last case of the group:

Case 1.—Extra-Uterine Pregnancy; Rupture, Hemorrhage and Shock. Mrs. D., aged 25, on the evening of September 23, while undressing to retire, was attacked by sudden pain in the left iliac region. It did not last long and was relieved by rest and warm applications. This lady had been married six years, and about two years since suffered a miscarriage with considerable hemorrhage; since that time she had complained of pelvic pain and menstrual irregularity. At the time mentioned she had missed two menstrual periods. On the Wednesday night following she was attacked with violent pain in the same region, much more violent than before, and was given a full dose of morphia hypodermically which gave her some relief. On the following morning she got up to empty the bladder and while doing so fainted, became deathly pale and cold and was seized with nausea and vomiting. The pain was intense and for several hours she exhibited the symptoms of profound shock and internal hemorrhage—pallor, bloodless lips, surface cold, and pulse rapid, small and feeble. Under the influence of stimulants freely administered, hot applications to extremities, mustard to epigastrium, and atropia hypodermically, she gradually rallied late in the afternoon. On the following day her abdomen was swollen and tympanitic, and very sensitive to the touch. Three days afterward she passed a perfect cast of the uterine cavity. Her pulse ranged about 120, and she had an evening temperature of 101.

This description of her symptoms is a literal extract from a letter written me at the time by her father, himself an experienced practitioner of medicine. Three days later her father wrote that her symptoms were materially improved. The pulse had fallen to about 100, the temperature had come down to normal and her condition was better in every respect. Still the abdomen was considerably swollen and quite tender in the left iliac region. There was a slight bloody flow from the uterus. These symptoms it will be observed, correspond with the shutting off of the area of rupture and hemorrhage from the general peritoneum, with arrest of bleeding temporarily by blood clot. On Thursday, October 11, she was transported in a carriage to the railroad station, placed in a sleeping car, and brought to the Jennie Casseday Infirmary for Women in Louisville. She bore the journey well, and reached the infirmary without aggravation of symptoms. She was accompanied by her father and husband, both of whom are physicians. An examination of the pelvis demonstrated that the cavity was choked with effusion. The uterus was pushed to the right, and Douglas' pouch and the left lateral space packed.

Saturday morning, October 13, I opened the abdomen and found the pelvic peritoneum filled with blood clot, which was breaking down; peritonitis was active and progressive. After removing two or three pints of blood clot, I brought up into the incision the left uterine appendage, and tied it off close to the uterus. The point where the tube ruptured is very plainly seen. An examination of the uterine appendage on the opposite side demonstrated the existence of chronic salpingitis with adhesions and occlusion of the tube, evidently the result of long standing chronic inflammation. It was removed. The peritoneal cavity was flushed with several gallons of warm distilled water, a drainage tube placed, the incision closed, and the patient returned to bed. Her convalescence was uninterrupted. Her pulse remained under 100; she suffered no pain; the abdomen remained flat; the bowels were moved on the third day in response to an enema; the drainage ceased by the third day; the tube was removed, and convalescence was established without any interruption whatever. She returned home quite well at the end of the fourth week. Drs. Coleman Rogers, Mandeville Thum, and Robert Stuart were present at the operation.

Case 2.—Chole-Lithiasis; Impaction of Cystic Duct; Cholecystotomy. Mrs. B., of Uniontown, Ky., was brought to me by Dr. Norman, a well-known physician of that place, on Wednesday, Oct. 10, 1894. She is 52 years of age, of vigorous constitution, and until three years ago enjoyed uniformly good health. For three years past she has suffered with frequent violent paroxysms of abdominal pain, only imperfectly relieved by large doses of opiates. Her digestion was impaired, she was several times jaundiced, and for several months past her suffering was almost constant. She had been treated by different physicians for various supposed conditions of disease. Dr. Norman some months ago detected a globular tumor in the right hypochondrium which had enlarged steadily. An examination of the tumor gave conclusive evidence that it was an enlarged gall bladder, and with associated history justified a diagnosis of gall stones, most probably impacted in the cystic or common duct.

Thursday morning, October 11, the day after the patient's arrival at the infirmary, I did cholecystotomy. A vertical incision about three and a half inches long was made immediately over the tumor; firm adhesions were encountered all about the distended gall bladder. These were carefully separated and the gall bladder brought up into the incision. A flat sponge was packed underneath so as to protect the

peritoneum and the gall bladder instead. The gall bladder was filled by a perfectly clear fluid, a mucoid secretion characterizing this form of biliary obstruction. After emptying this, my finger detected a large stone firmly impacted deep in the cystic duct. I experienced considerable difficulty in removing it. It is well known that the walls of the gall bladder and its ducts are thin and friable, and hence the utmost delicacy of manipulation must be observed when the duct is stretched by an impacted stone. It is very easy to push it through the thin tissue of the duct. Various forceps have been invented for the removal of stones under these circumstances, some with padded blades for crushing the stone from the outside of the duct. With two fingers introduced within the abdomen and the index finger of the other hand within the gall bladder, I succeeded in dislodging this large stone without injury to the duct, and removed it.

The further steps of the operation consisted in sewing the incised gall bladder to the parietal peritoneum of the incision, introducing a rubber tube into the gall bladder, and closing the incision, (except at the central point where the tube was placed) in the usual manner. In this way the gall bladder is drained through the abdominal wall. Before the operation was concluded bile began pouring out through the gall bladder. The patient's convalescence was smooth and uninterrupted, being entirely afebrile and requiring no opium or other anodyne. The tube remained in the gall bladder until the discharge ceased and the bile followed the normal channel. The opening closed altogether during the fifth week. The patient was entirely and immediately relieved of pain and is now quite restored to vigorous health.

Case 3.—Suppurative Salpingitis and Peritonitis.—L. J., age 25, referred by Dr. P. F. Barbour, had suffered for several months from pelvic inflammation. The history and symptoms leave no doubt as to the infection being due to gonorrhea. For seven weeks prior to admission to the infirmary she was very ill with peritonitis. The abdomen was tender and tympanitic, pulse rapid and temperature ranging from 101 to 104 degrees F. The suppurative stage was marked by rigors and profuse sweating. Pain was paroxysmal and so severe that morphia was daily and freely used.

An examination revealed the characteristic symptoms of suppurative salpingitis and pelvic peritonitis. After free purgation, abdominal section was done October 9. The pelvic viscera were matted down with adhesive exudate, which being separated allowed pus to flow out of the incision. The Fallopian tubes were distended with pus, the left having ruptured. The tubes were glued to the ovary on each side and both ovaries had been converted into abscess sacs. The specimens illustrate the extreme ravages of specific suppurative salpingitis and ovaritis. After thorough enucleation the rotten appendages were tied off close to the uterus. The peritoneum was flushed freely with warm water, a glass drainage tube placed, and the incision closed. The progress of the case was uninterrupted, and convalescence was prompt. Neither morphia or other opiates were given during convalescence. At the expiration of the third week the patient went to the country and writes that she is quite well. Drs. Barbour and Rogers, of this city, and Drs. Stuart and Dunn of Henderson, were present at the operation.

Case 4.—Post-puerperal Pelvic Inflammation, with Suppuration.—Age of patient 21 years; confined July 26, 1894, and during convalescence developed peritonitis. After an acute illness of several weeks, during which time she exhibited the symptoms of puerperal peritonitis, the inflammatory process seemed to abate and her condition was hopeful. During the latter part of August her condition was complicated by abscess of the breast, which required incision and gave much distress, at the same time adding to the exhaustion of an already enfeebled condition. I saw the patient in the latter part of September in consultation with the family physician, Dr. Coleman Rogers. For several weeks preceding the condition was one of seeming improvement with recurrent attacks of violent pain necessitating repeated doses of morphin, accompanied with fever and sweats. These exacerbations undoubtedly marked the invasion of additional areas of peritoneum by the inflammatory process. Dr. Rogers had utilized purgatives, as well as all other non-surgical resources in the treatment, and requested a consultation with a view to operative interference. An examination disclosed the most extreme and advanced lesions of post-puerperal pelvic inflammation. The uterus was bound down upon the floor of the pelvis, the fundus in Douglas' pouch, and the rectum almost occluded by its pressure. All the pelvic viscera were fixed, being bound by extensive deposits of organized exudate. There was an indistinct sense of fluctuation in the lateral pelvic spaces when the bimanual touch was applied. The patient was pale, feeble and emacia-

ted, racked with daily exacerbations of pain and constant fever.

On Oct. 6, 1894, during the eleventh week of illness, the patient was removed to the infirmary and on the following morning abdominal section was made. Ether was very cautiously given, and the operation performed as quickly as thorough and careful work would permit. On opening the abdomen (suprapubic) the omentum was found agglutinated to the intestines, roofing in the pelvic viscera. Releasing this and working a track of cleavage with two fingers through the coils of intestines the pus freely poured out of the incision. In separating the adhesions at the floor of the pelvis, and enucleating the disintegrated tubes and ovaries (applying only gentle force cautiously), my index finger penetrated the uterus. Recognizing this, I forcibly released that organ (observing the utmost care not to open the rectum to which it was adherent), and brought it up with the suppurating appendages. The body of the uterus was friable, breaking down under slight force; the appendages were mere abscess sacs. Having separated adhesions so as to release the intestines, I threw a small wire attached to Kœberle's nœud around the cervix uteri, and removed the uterus and appendages. The peritoneum was thoroughly doused with several gallons of warm water, a drainage tube placed, and the incision rapidly closed. The operation was completed in thirty-two minutes. Dr. Guest, the anæsthetist, had already administered stimulants hypodermically. The patient was put to bed without any pulse that we could detect in the wrist, though the heart was acting with great rapidity. The usual stimulants subcutaneously, with dry heat to the surface and extremities, were persistently applied, and the patient gradually rallied. The pulse was rapid and small for three days, then gradually improved. The drainage tube was removed on third day, the nœud came away on the eleventh day, and healing was prompt and complete. The patient rapidly gained strength and flesh, and is now a perfect picture of health. Dr. Coleman Rogers and Dr. T. P. Satterwhite were present at the operation.

THE OPEN AIR TREATMENT OF CONSUMPTIVES WHO CAN NOT SEEK CHANGE OF CLIMATE.

Read at the meeting of the "Tri-State" Medical Society at St. Louis, April 2, 1895.

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The importance of climatotherapy in the treatment of consumption was recognized even by the ancients. As long ago as the time of Hippocrates and his immediate successors it was held that consumptives should be removed to a distance from the locality in which they had contracted their disease. From that day to this, physicians have been in the habit of ordering change of climate for their phthisical patients in the belief that in a judicious and early employment of climatotherapy lies the consumptive's best hope of recovery. Much thought and investigation have been given to the determination of those qualities of climate to which its remedial virtues may be attributed. These would seem to be dryness, high altitude, equability and purity. Yet that dryness and high elevation are not fundamental requirements for

all cases, is shown by the fact that some patients do well in sea stations such as the Island of Madeira. Equability of temperature can not always be relied on at resorts of greatest repute, such as those of mountain climates. The one quality common to all well known and justly celebrated resorts is purity of the atmosphere, and when combined with dryness and low atmospheric pressure, of mountain resorts, we have those qualities most conducive to recovery from pulmonary tuberculosis. Nevertheless, some patients recover who never seek a high altitude; others, who never leave home. And those who seek the most favorable climate possible receive little or no benefit unless they remain out of doors a large proportion of the time. Furthermore, Dettweiler, from his Sanitarium at Falkenstein, Germany, reports from 24.5 to 27 per cent. of recoveries of patients in all stages. And yet his institution is located in the cool, damp, changeable climate of Germany in the Rhine country. Similar results are achieved at Bremer's Sanitarium in the equally unfavorable climate of Görbersdorf, North Germany. Surely then, there must be something more than mere removal to a favorable climate if the consumptive would recover, and on the other hand there may be some hope for the consumptive who can not seek change of climate. This condition upon which depends the welfare of the phthisical patient, whether at home or at a health resort, is life in the open air.

Consumption may be said to be the disease of indoor life. Its victims are those forced by occupation or circumstances to spend their days within four walls. It rarely attacks persons who work in the open air, unless their health be undermined by vicious habits or conditions of environment that antagonize the beneficial effect of their outdoor life. While penning the foregoing sentences I was consulted by a lady of tubercular family history, who had developed pulmonary disease within a few weeks previous, largely I believe in consequence of having exchanged residence in South Dakota with much time spent out of doors, for the opposite conditions of life in Chicago. Such facts are so numerous as to point unmistakably to the disastrous consequences of indoor confinement. Why then should this, Nature's remedy, fresh air, be withheld from individuals already suffering from pulmonary tuberculosis? And yet this is precisely what is done in only too many instances.

Last fall I was consulted by a young lady with pronounced pulmonary tuberculosis, whose physician had warned her against going out doors, lest she should take cold. It is not at all uncommon to find the consumptive in an advanced stage with all the phenomena of sepsis, lying in an overheated, ill-ventilated apartment from which he is never moved.

Therefore I desire to lay down two following propositions: 1, a consumptive who can not seek change of climate should pass his days in the open air, no matter what the stage of his disease; 2, under proper precautions this may be done in all weathers, excepting the severe cold of winter, when the thermometer registers below 15 degrees above zero.

And now I propose to devote the remainder of this paper to the description of how and why this should be done.

In the summer of 1893 it was my good fortune to be able to visit Dettweiler's famous Sanitarium at Falkenstein, where the open air treatment of consumptives is carried out in its perfection and with truly brilliant