is needed for even the smallest contribution, either to our knowledge of the subject or to our way of looking at the knowledge we already possess. It is with the latter alone that I shall attempt to deal.

I think that it will be admitted as an established fact that constantly recurring irritation of the air-passages, however brought about, is sufficient to cause phthisis. This is well exemplified in the phthisis of workmen, millstone makers, &c. But I do not know if it will be so readily admitted that constantly recurring irritation of the air-passages is the whole and sole cause of phthisis. This is my opinion: *Irritation* is the *cause* of phthisis. There are various degrees of susceptibility, and it is important to notice that what will irritate one pair of lungs will not necessarily irritate another. Now, it seems to me that if we can thus narrow down the cause of this terrible scourge to a single word a most important point has been gained.

We all know how much hereditary taint, diathesis, and the general surroundings of an individual have to do with the form and progress of the disease. But it seems to me that all these, and even the dread bacillus itself, play their part after the disease has begun. The starting-point being, as I have before said, irritation, people predisposed to phthisis will get it if their lungs be exposed to constantly recurring irritation; otherwise they will escape. If it be allowed that I have gained my point, I think I can make another. I can, metaphorically speaking, put my finger on the constantly recurring irritation to which the vast majority of phthisical patients owe their disease. It is simply *cold air breathed at night*. Not that cold air in itself seems to be an irritant. If the patient breathed air as cold by day as by night, it would, I believe, be harmless. It is the change from warm air by day to cold air at night that does the mischief. Lungs predisposed to disease are compelled to accommodate their capillary circulation night after night to a temperature ten, twenty, or thirty degrees below that which they have enjoyed by day. This happens, too, when all the sensations are in abeyance, and they are no longer under the protecting influence of the will. In the early morning, when sleep is deepest, the air is coldest, and probably the mouth is wide open, so that the poor lungs have not even the protection of the nasal chambers. Lungs so exposed never get an opportunity to recover their tone. A slight cold perhaps starts the mischief, and then this constantly recurring irritation slowly but surely does its work. If the air be close, and septic as well as cold, matters are rendered thereby so much the worse. The secretions become vitiated, and bacilli begin to swarm. The truth of my proposition seems to me to be abundantly proved by the behaviour of patients who are transported to an equable climate. Other things being equal, the more equable the climate the better the results. Patients do well in Australia, where the climate is more equable; they do better still at Davos, where the climate is still more equable; and perhaps best of all in some of the African steppes, where the climate is both equable and genial. To my mind, this is demonstrated with the exactitude of an experiment. If people with undoubted phthisis do get well and remain well whilst in these climates, the cause of their disease must be sought elsewhere than in heredity, diathesis, and bacillus, all-important as these may be in the course and progress of the malady. Conversely, I believe that there are certain favoured climes where phthisis is unknown. But let us transport one of their inhabitants, whether man or beast, to this or a similar climate, and it is well known that they are almost sure to die of phthisis. Does not the very course of the disease, as so ably explained to us by those who have made it their special study, seem to point to an ever-recurring irritation of feeble intensity—the gradually progressive mischief downwards from apex towards base? One can almost picture the brave little cells repairing the breaches by day that were made by night, and opposing, millionth of an inch by millionth of an inch, the onward progress of the foe; the thousand conceivable accidents that may occur, explaining why one pair of lungs should succumb sooner than another. Dr. Fagge, in his *Principles and Practice of Medicine*, places as the foremost cause of phthisis "*the habitual breathing of air rendered impure by overcrowding and defective ventilation.*" But overcrowding and bad ventilation are not sufficient to account for phthisis, or it would surely be rampant in the native huts of Iceland, and other cold countries, where overcrowding is common, and ventilation, as we understand the term, is a sheer impossibility. Dr. Fagge says: "One would hardly send a patient with phthisis to Iceland, yet the natives

escape the disease." If their huts were as warm as our houses by day, and as cold as our bedrooms by night, I believe that phthisis would very soon make its appearance among the Icelanders. I well remember the shudder, which recurs as I write, with which many years ago I read Dr. MacCormack's description of his bedrooms at night—"As cool and breezy as the adjacent hills." I believe that it is a fact that he did not succeed in warding off the dread disease. His theory was that phthisis was caused by breathing pre-breathed air. Hence he would have none of it. He was keen enough to perceive that the air at night had much to do with it, but he missed the essential point—viz., that phthisis is induced by the constantly recurring irritation caused by breathing air *colder* at night than by day. It is well known that those who live most in the open air are the least likely to suffer from phthisis. Why? Simply because their lungs are so accustomed to cold air that they are not irritated by it at night. Phthisis is a disease of the night. It is so simply because we inhabit hot rooms by day and cold rooms by night, and many lungs find it more than they can do to accommodate themselves to the constantly recurring change in the temperature.

It will be obvious that my theory has a very practical bearing. If it should lead the profession, and the public through them, to pay proper attention to the due warming of our bedrooms at night, and all night long, especially in all cases of diseases of the chest, I shall not have written in vain. If through this simple precaution it should be found that phthisis in this country may thereby be stamped out in the course of a few years, then my humble name would perhaps deserve to rank with even that of Jenner. I fully believe that if some means whereby a continuous supply of pure warm air could be given at night to those threatened—ay, and to those actually suffering—with phthisis, we should in the course of a very few years find that phthisis was as rare in England as in Egypt or Iceland.

CIRSOID ANEURYSM; EXCISION; RECOVERY.

By G. A. WRIGHT, B.A. OXON., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE MANCHESTER ROYAL INFIRMARY, ETC.

MRS. L—, aged twenty-nine, was admitted under my care into the Royal Infirmary on Nov. 2nd, 1887. She was a healthy woman, and gave the following history. When fifteen or sixteen years old, while combing her hair she scratched a little "pimple" on her head, and made it discharge a small quantity of watery fluid. Soon afterwards a swelling appeared, and gradually increased in size until she was twenty-four years of age, at which time she married. During her first pregnancy the swelling increased much, and at the birth of the child was as large as a thimble. There was then no pain, but pulsation, which had been felt slightly before, increased. Menstruation had no effect upon the swelling, but each pregnancy (she has four children) seems to have accelerated the rate of growth of the aneurysm, and it became painful. Both pain and swelling had increased rapidly of late. On admission there was a swelling in the left occipito-parietal region of the size of a goose egg. It was spongy to the touch and pulsated. The tumour could be partially emptied by pressure, and apparently contained one or two coagula; a soft bruit could be heard in it. Over the most prominent part of the aneurysm the skin was red, and enlarged vessels were to be seen in it. The occipital artery, much enlarged, could be felt running into the tumour, and on compressing this vessel all pulsation ceased, and the swelling diminished in size and became softer. The patient complained of occasional shoots of pain and of a constant burning sensation. The aneurysm was considerably larger than when it was first seen in the out-patient room a fortnight previously. Besides the occipital, another large vessel—the posterior auricular (?)—appeared to feed the growth. On firm compression a well-defined hard rim could be felt surrounding the base of the mass. The measurements were as follows: Greatest transverse diameter, $4\frac{1}{2}$ in.; greatest longitudinal diameter, $5\frac{1}{2}$ in.; circumference, 11 in.; greatest elevation above the scalp level, $1\frac{1}{2}$ in. On Nov. 7th a curved incision was made below the posterior part of the tumour with the intention of tying the occipital artery, but no well-defined vessel could be found at this spot. An

aneurysm needle was passed beneath the line of pulsation, but apparently really this transfixed an outlying part of the growth. As, however, pressure at this part arrested pulsation almost if not quite completely, a ligature was tied round the included mass of tissue, and after securing a few smaller vessels the wound was closed, and a large specially adapted truss was applied over the dressings to compress the aneurysm. The pressure of the truss was, however, so painful that it was removed by the house surgeon in the evening. On the 8th the truss was padded and reapplied. On the 9th the scalp was cedematous, probably as a result of the truss pressure, and pads of wood wool and a capeline bandage was substituted for the truss. The general condition of the patient was very good. The treatment was quite ineffectual, and the aneurysm was increasing in size, so on the 17th two long pins were passed at right angles to one another beneath the base of the mass, and an elastic ligature was wound round them; the whole mass was then readily excised. On removal of the elastic ligature there was free bleeding for a moment or two, but the vessels were quickly ligatured and some oozing that remained stopped by the actual cautery. The main vessel of supply (occipital) was fully as large as, or larger than, the femoral artery of an adult; as this pulsed very freely and was dilated beyond the line of excision, the wound was prolonged

backwards, the skin reflected, and ligatures passed round the mass of tissue containing the vessel. The main part of the wound was left open, dusted with iodoform, and dressed. The subsequent course of the case was uneventful; the wound healed somewhat slowly, and its progress was delayed by the gradual coming away of the silk ligatures, which caused some suppuration. The woman was able to leave the hospital on Dec. 25th, and the wound was soundly healed by the latter part of January. She is now quite well, free from pain, and there is neither swelling nor abnormal pulsation.

The case is a typical one of the circumscribed variety of cirroid aneurysm or cavernous angioma. Its vessels of supply were few, but very large and very thin-walled, the occipital artery being its main feeder.¹ It was no doubt well suited to the treatment adopted of complete excision, which was more radical and less dangerous than ligature of the external carotid. The variable rate of growth, its rapid increase of late, its association with pregnancy, and the effect of the first slight injury are noteworthy. The accompanying sketch by one of our house physicians (Mr. Bury) gives a good idea of the aneurysm; to him, and to Mr. Bannister (the house surgeon) and Mr. Hitchen (the dresser), I am indebted for help in recording the case.

¹ The specimen is in the museum at Owens College, but the injection is not a successful one.

THE trial of Dr. Middleton, who, it will be remembered, shot a Spanish gipsy who was attempting to rob him, will take place at Cordova on the 7th inst.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

ACUTE TRAUMATIC TETANUS; RECOVERY; REMARKS.

(Under the care of Mr. EDMUND OWEN.)

IN this case, an example of the acute form of the disease, the best possible result was obtained by the use of morphia in large quantities. To the fact that the patient was kept constantly under the influence of the drug, whilst due regard was paid to the administration of suitable nourishment and the patient kept thoroughly quiet, Mr. Owen ascribes the recovery of the man. The following is an epitome of notes by Mr. R. H. Cole, dresser.

W. M.—, aged thirty-six years, a carman, a smallish man, was admitted on Dec. 5th, 1887, for injury to the right leg from a crush received the day before. There were contusion of the skin and extravasation of blood about the inner border of the right tibia, at the junction of its upper and middle thirds. Fracture was at first suspected, and the limb was put up in a box splint.

Dec. 14th.—During the last few days the part has been inflamed, and a large dark bulla has appeared and burst. Temperature 100·6°. The man was put under ether, and the part examined. The sloughing skin was removed, with much disintegrated clot. No fracture could be detected; the periosteum was found to be stripped from the bone for a couple of inches. The wound was dressed with boracic fomentations.

16th.—Wound looking better. It was syringed out daily with lotio hydrarg. perchlor. (1 in 1000), and dressed with mercuric chloride wool and iodoform.

20th.—This morning (sixteen days after injury) he complained of stiffness about the lower jaw and back of the neck; the masseters and platysma were somewhat rigid and the angles of the mouth pulled outwards and downwards. The lips and tongue were dry; he complained of thirst.

21st.—Last night he had cramps in the right groin and extending down to the knee. On his being touched the pain was aggravated, and he had a general spasm, during which the abdominal muscles were hard. A quarter of a grain of morphia sent him to sleep. During the day the spasms in the right groin were less frequent, but his face was more distorted, and he could only open his mouth for half an inch.

22nd.—Early this morning he had a slight general paroxysm, with expiratory groanings. He was evidently in great pain. His neck was very rigid, and the abdominal muscles were extremely tense. The man was greatly depressed, crying at intervals. The bowels were obstinately constipated. He still complains of thirst. He was kept well under the influence of morphia; he had altogether two grains and a quarter injected subcutaneously during the day. He is well fed up with nourishing liquids and stimulants. Wound doing well.

26th.—He has been better since last note; he is kept constantly dozing under the influence of morphia. This morning when he woke up his jaws closed spasmodically, and he bit his tongue severely.

27th.—Patient worse; the spasms are most marked about the right (side of injury) thigh, and are very intense. Abdominal muscles especially tighten up the moment he awakens out of sleep, but they are always in a state of contraction. Still kept under morphia, and screens kept round the bed, which is in the quietest corner of the ward.

28th.—He complained of spasms in the back for the first time. Respiratory muscles do not seem affected.

30th.—There was marked opisthotonos; pillows were placed in the arch of the back to ease the lordosis. Left arm had spasms; the deltoid was hard.

31st.—He had been in great pain during the night, crying and groaning, and he was in agony during the dressing. He was absolutely as stiff as a plank. Still much constipated. Sweats a great deal.