

establishing heredity in cases of suppression than in superabundance, because in the former the loss is apparent, and is classed by the general public as a deformity to be avoided; whereas supernumerary digits are usually removed by surgeons during infancy, and thus the tendency is concealed.

I am well aware that there is a wide gap of evidence between the suggested origin of the crooked little finger and the establishment of a hereditary tendency to suppression of digits, and it is possible they depend upon two processes so distinct as scarcely to be related. Such suppression as occurs from disuse through generations upon generations, or through ages upon ages, and which I maintain can be shown to be taking place in the case of the little toe, is so gradual and so general that any idea of deformity is completely enshrouded by time. It is only when we observe an abrupt suppression in development that we regard the result in the light of deformity. When such tendency exists, no doubt in-breeding would increase and perpetuate the defect; and it is not improbable that in families where several well-marked instances occur there may have been an accidental union in the parents of two individuals, each with a slight deviation from normal in the direction of the result produced. Hence the importance of observing minor defects which, increasing by generation, may be pregnant with graver deformities in the unborn future.

Finsbury-square, E.C.

THE CONTINUOUS ADMINISTRATION OF OXYGEN IN A SEVERE CASE OF BRONCHO-PNEU- MONIA FOLLOWING INFLUENZA; RECOVERY.

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AND

HORATIO P. SYMONDS, F.R.C.S. ED.

THE patient, a lady aged fifty-seven, was attacked with influenza about the middle of January of the present year, from which she was recovering, when, on Feb. 1st, a relapse set in, accompanied by the development of lung symptoms, which gradually increased in severity. On the morning of Feb. 5th her condition was as follows:—Slightly cyanosed. Temperature 101.4°; pulse 108; respiration 30. Urine free from albumen. She was troubled with a most persistent dry cough, unattended with expectoration, which had been kept in check by the inhalation of the chloroform mixture described in THE LANCET of Jan. 30th. Over the lower half of the lungs, both anterior and posterior aspects, abundant sharp large and small crepitations could be heard. In addition, near the inferior angle of the scapulæ on either side the breathing was bronchial in character, especially so on the right. At 9 P.M. the same day the temperature was 100°; pulse 96; respiration 38. The following morning the patient was decidedly more cyanosed, the respiration had increased to 40 per minute, and her pulse was weaker. On Sunday, Feb. 7th, her condition remained stationary. In the region of the inferior angle of the right scapula the breathing had now become tubular in character and the percussion note dull. A patch of dulness with bronchial breathing was detected over the base of the left lung. On this day we agreed to try the effect of oxygen, and gave it for short periods, with the result of slightly diminishing the cyanosis and improving the pulse. On Feb. 8th (the following morning) the patient was decidedly worse. Her respiration had increased to 50 per minute; pulse 120; cyanosis much more marked. She was lying in a drowsy, semi-conscious condition, unable to sleep on account of the dyspnoea. She had voided very little urine in the past twenty-four hours, which contained a heavy cloud of albumen. We now decided to push the oxygen and to administer citrate of caffeine hypodermically. A good stream of oxygen was turned on, the mouth piece being held well over the mouth. At the end of twenty minutes the respiration had fallen from 50 to 40, the pulse from 120 to 106, and it had improved in character; the lips had assumed a ruddy in place of a purple tint, and the patient was dozing calmly. The stream of oxygen was now diminished and the nurse instructed to keep a small quantity playing

over her mouth during the day. At our evening visit we found that she had rested more calmly throughout the day, and that the cough had apparently been much benefited by the oxygen. Her general condition, however, gave us much anxiety, as the rapid improvement of the morning had not been maintained, and it was clear that the mischief in the lung had in no way abated. The nurse was instructed to continue the oxygen throughout the night. On our arrival on the morning of Feb. 7th we found the patient in a critical condition. She was quite unconscious of her surroundings, and could with difficulty be aroused; the cyanosis had much increased; pulse 120; respiration 42. On inquiry, we found that our oxygen cylinder had become exhausted at 3 A.M., and that the patient had been without any for six hours. Two hours and a half later we were enabled to borrow a cylinder in the town, and at once recommenced the administration. She was next seen in the afternoon at 3 P.M., when a distinct improvement was noticed. At our evening visit at 9 P.M. the improvement all round was most marked. The temperature had fallen from 102° to 99°; the pulse from 120 to 104; the respiration from 45 to 38. From this point up to the present time the improvement has been continuous and uninterrupted. The administration of oxygen was kept up throughout Tuesday night (Feb. 9th) and Wednesday, after which it was given for short periods, the intervals between the administrations being gradually lengthened as the lungs cleared, so that for the past few days no oxygen has been required. For some days past the patient's temperature has been normal; pulse about 80; respiration 27. The lung symptoms all point to a gradual clearing up of the mischief.

Remarks.—We would point out that up to the time we agreed to administer the oxygen continuously the patient's condition had steadily grown worse, and that she was then in a very critical condition. The continuous administration was immediately followed by unmistakable improvement, as shown by the marked fall in the rate of respiration and pulse and improvement in colour. The oxygen also enabled her to get more sleep and rest than had been the case for some days. Further than this, it had a marked influence on the very troublesome and intractable cough—so much so that after we had given up the continuous administration the nurses were so certain of the relief likely to follow oxygen inhalation that they gave her a small quantity from time to time to check it. The rapid return of all the bad symptoms on the Tuesday morning, when the patient had been without oxygen for six hours, and the equally marked improvement within a few hours of its readministration, appeared to us a crucial test. The conclusion we formed was that for oxygen to be of value in these cases it should be administered more or less continuously. The oxygen cylinders were supplied daily by Brin.

Oxford.

A CASE OF SCIRRHUS OF THE BRAIN SECONDARY TO THAT OF THE BREAST.

BY THOMAS WILSON, M.D., B.S. LOND.,

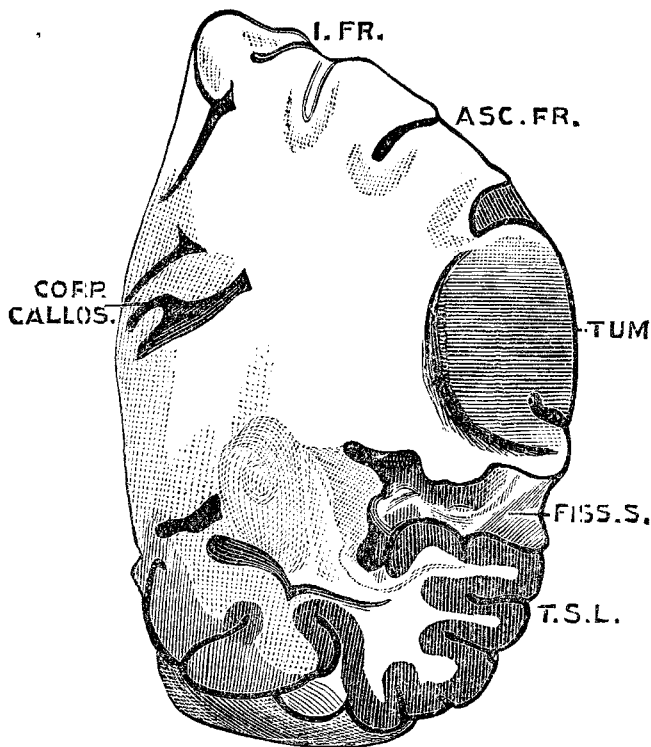
HON. GYNÆCOLOGIST TO THE WOLVERHAMPTON AND SOUTH STAFFORDSHIRE GENERAL HOSPITAL.

THE following case occurred while I was resident medical officer at the National Hospital for the Paralysed and Epileptic, and has been recalled by the similar case published by Mr. Beadles in THE LANCET of Oct. 3rd, 1891. For permission to publish the notes I am indebted to Dr. Charlton Bastian, under whose care the patient was.

Charlotte M—, aged sixty-eight, was admitted to the Hospital for the Paralysed and Epileptic, Queen-square, London, under the care of Dr. Bastian, on March 1st, 1887, complaining of fits and left-sided paralysis. In November, 1886, the patient had had her left breast removed in St. George's Hospital, and I am indebted to Mr. Bull, at that time surgical registrar, for his courtesy in supplying notes of the case. From these it appears that a large scirrhus growth, extending from the outer margin of the breast into the axilla, was removed, together with the breast, which contained a very small hard growth, by Mr. Dent on Nov. 18th. The axillary tumour could not be entirely removed at the time of operation, and it was thought that recurrence had taken place before the patient left St. George's Hospital for a convalescent

home. About a fortnight after Christmas the woman was sitting reading one day, when she suddenly began to feel giddy and sick, and in two or three minutes lost consciousness for a short time. During this attack urine was passed, and on coming to there were vomiting and diarrhoea; no paralysis of any part was observed immediately after this attack. Five or six weeks later the patient was wakened from sleep by a feeling as if something were pricking in the left side of the mouth; she got out of bed, and then twitching began at the left angle of the mouth, followed by twitching in the fingers and thumb of the left hand; then the patient fell down, and her head turned to the left and bumped the floor spasmodically. This attack lasted over an hour, the convulsions being almost entirely left-sided, and there being no loss of consciousness. One or two fits have occurred since this, but the woman does not remember anything about them. The left arm and leg have gradually been getting weak since about Christmas, and the patient has noticed that food tends to collect in the left cheek since a week or two after the first fit. There has been slight headache (not localised); no vomiting, except on one occasion after the first fit, as above described. The patient's health previous to the tumour in the breast had been good. She had borne eight children, one dying of "water on the brain" at four years of age. A sister and a cousin on the father's side had cancers; two brothers died of phthisis; there was no other family history of importance. On admission the woman was dull, taking little interest in what was going on around her, but giving quite rational and clear answers to questions. There was some weakness of the left leg, great weakness of the left arm and at the left angle of the mouth, while the movements of the rest of the left face were decidedly, but not greatly, weaker than those of the right; the faradaic and galvanic reactions were normal and equal on the two sides of the face. The left half of the tongue was also weak, and articulation rather thick and indistinct. The knee- and radius-jerks were active, greater on the left, and there was well-marked ankle-clonus on the left side; none on the right. There were slightly diminished tactile, markedly diminished and altered painful, and much diminished thermal sensations all over the left arm and leg and left half of the face and trunk, the sense of position being also very imperfect in the arm and leg, especially the former. The right plantar reflex was active, the left absent; no other superficial reflex could be obtained. There was no hemiopia or any other affection of any of the special senses. The edges of both optic discs were blurred all round, and there was slight swelling of the papillae, but no hæmorrhages; the pupils were equal and their reactions normal. The heart's impulse was diffused and fairly strong, and a soft systolic murmur was heard at the apex and over the whole left side of the heart; there were a few dry râles in each lung; the urine contained no albumen or sugar. There was a large scar running upwards and outwards in the situation of the left breast; some thickening was felt in the axilla and a few small hard glands just above the left clavicle and in the left posterior triangle. The left arm was much swollen from the middle of the arm to below the middle of the forearm, the swelling being very solid and not easily pitting for the most part. During her stay in hospital the patient complained of occipital and frontal headache almost every night, and there was a little wandering delirium occasionally. The hemiplegia gradually increased, and became absolute by about March 24th. — April 4th: The temperature has been irregularly raised for three days, varying from 100° to 103°; the woman is very drowsy and mutters a good deal; there is occasional Cheyne-Stokes breathing, and there has been complete incontinence for several days, and considerable tympanites came on three days ago and continues. The left limbs are quite flaccid, the right still preserving their tone. Knee-jerk and ankle-clonus have quite disappeared on the left side, the right knee-jerk being present, though slight. There is no plantar reflex to tickling on either side; to prick of pin the right is still rather greater than the left. The patient gradually became more and more unconscious, and died comatose on April 9th. A few hours before death the left lower limb was observed to be very livid and congested, presenting a marked contrast to the right one, and the day before death the œdema of the left hand and arm, which had been very marked ever since admission, almost entirely disappeared.

At the necropsy, made eighteen hours after death, nothing worthy of note was observed about the calvaria or dura mater. On reflecting the latter, the convolutions over the parietal and greater part of the frontal and occipital lobes on the right side were found to be markedly flattened; over the whole left hemisphere there was considerable wasting of the convolutions, with excess of fluid. There was a moderate amount of atheromatous degeneration in all the vessels at the base of the brain. No tumour could be seen on the surface. A vertical transverse section through the lower end of the fissure of Rolando cut through a tumour in the right hemisphere the size of a walnut, hard in consistence, in marked contrast to the adjacent brain substance, which was softened, and from which the tumour was marked off by a pretty sharply defined margin. The colour of the section of the new



Tracing from a photograph, actual size, of the vertical transverse section passing through the lower end of the right fissure of Rolando. TUM., Tumour. FISS. S., Posterior limb of the fissure of Sylvius. T.S.L., Temporo-sphenoidal lobe. I. FR., Superior or first frontal convolution. ASC. FR., Ascending frontal convolution. In the temporo-sphenoidal convolutions the grey cortex comes out well, but in the upper part of the section the details are very indistinct, owing to the white softening affecting this part.

growth was on the whole greyish yellow, with numerous small hæmorrhages and many small points of fatty degeneration. On its outer side the tumour involved the cortex for about an inch, at one point, situate about an inch above the lower end of the fissure of Rolando, entirely replacing the grey matter; and the growth was limited to the ascending frontal and parietal convolutions, both of which it invaded at their lower ends. The rest of this section of the right hemisphere showed white softening of the whole centrum ovale, and this change was found to extend forwards as far as the genu of the corpus callosum and backwards as far as half an inch in front of the rostrum. The ventricles were distended with clear fluid, and the ependyma thickened and opaque. The pons, medulla, cerebellum, and cord presented no unnatural appearance. An infarction the size of a Tangerine orange was found on the posterior surface of the lower lobe of the right lung. Both lungs were extremely emphysematous throughout. There was considerable fibroid thickening of the mitral and aortic valves, and in the mitral valve were also some small atheromatous foci. The aorta showed merely slight atheromatous change near the heart. The right auricle and ventricle were greatly distended with black fluid blood, and also contained some rather firmly adherent decolorised clot. The liver and kidneys were much congested. No new growths were discovered on careful searching in any of these organs, nor in the uterus or ovaries; but in the spleen two or three small foci were seen under the capsule. There were some small hard glands above the left clavicle, and along the posterior border of the sterno-mastoid. There was no definite sign of recurrence

in the old operation scar, except just in one part, where there was a little hardening. Under the microscope the cerebral tumour presented the typical appearances of scirrhus carcinoma.

This case is one of very great interest from many different standpoints. In the first place, it would appear that, after all, scirrhus affecting the brain is not a very uncommon affection. Mr. Beadles notes in his communication that in a total of 202 post-mortem examinations in cases of cancer growths in the brain substance were found in four cases, a proportion of 2 per cent.; and doubtless many cases of secondary and some of primary cancer in the brain run their course either with no symptoms at all, or with such indefinite ones that they are not diagnosed before death, and are not found afterwards from want of examination of the cranial cavity and its contents. But where the growth is situated in or near the motor area of the cortex, as in Mr. Beadles' case and the present one, the symptoms thrust themselves upon one, so that even he who runs must read.

Thus in the case now under consideration grave cerebral mischief was indicated at the beginning by epileptiform attacks and gradually increasing hemiplegia. The gradual onset and the distribution of the paralysis, the headache, epileptiform attacks, and double optic neuritis, taken together, indicated that the disease was in the right hemisphere, and that it was in all probability a tumour; while

the removal some time previously of a tumour of the breast, and this tumour having been proved to be scirrhus, made it in the highest degree probable that we had to do with scirrhus of the brain. Further still, the mode of onset and spread of the convulsions in the second attack, as described in the history, showed that the irritative lesion at that time bordered closely on the cortical motor centre for the left lower face, which is situated at the lower part of the ascending frontal and parietal convolutions, and the correctness of this indication was beautifully demonstrated at the necropsy. In passing it may be remarked that the occurrence first of a sensory aura (pins and needles), immediately followed by clonic spasm in the same parts, is of interest in connexion with the theory that the motor area of the cortex contains sensory cells. The relation of the case to the surgery of the brain is also of much interest and importance; for if the indications afforded by the history and present state of the patient had been correctly interpreted and acted upon soon after the second fit, there can be little doubt that the tumour could easily and safely have been removed, and thus the patient's life prolonged, and the softening, which would seem to have been secondary to, and probably in some way caused by, the tumour, possibly prevented. Taking all the circumstances of the case into consideration, however, it is quite open to doubt and argument whether this would have been a desirable consummation.

Wolverhampton.

A CASE OF

INFLUENZA PNEUMONIA TREATED BY THE

EXTERNAL APPLICATION OF COLD.

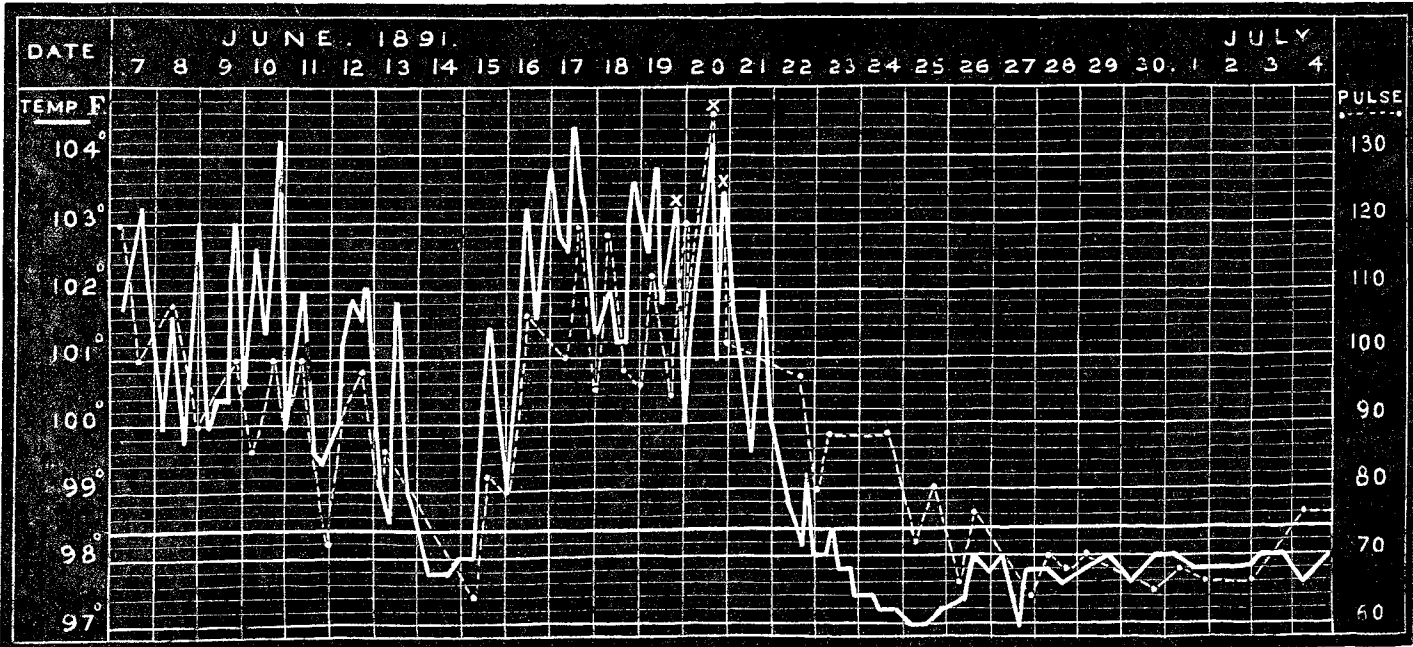
BY WM. GORDON, M.A., M.B. CAMB., M.R.C.P.,

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VERY little has been said about cold sponging for the reduction of temperature in influenza pneumonia. Certainly in the dangerous pneumonias occurring in elderly people I am sure the less said about it the better; and, indeed, in many such there is very little temperature to reduce. But I believe there are a few cases in younger patients where

what I consider the indications for it—viz., a previously sound patient and a high temperature of sufficient duration and degree to be in itself a source of danger.

Charles W—, aged twenty-eight, an hotel servant, was admitted to the Devon and Exeter Hospital on June 7th, 1891, suffering from pneumonia of the left base. He had been of temperate habits and in good health until attacked by influenza a week previously. In spite of cough and malaise, he remained at work up to the morning of his admission, when he was seized with severe stabbing pain in his left side. When admitted his temperature was 101·8°; pulse 120; respiration 24. There was then little to be detected except fine crepitation over the left lower lobe. Sputum rusty. He complained greatly of pains in the back and limbs, as well as of the pain in the left side. Ten



The crosses (x) indicate the points at which cold was applied.

life is in peril, largely from the effect of continued high fever, and where it becomes needful to reduce this fever in some way or other. Quinine may fail, as in the instance I am going to relate, and when the choice lies between cold and some depressing drug, such as antipyrin, I should certainly prefer cold. In THE LANCETS of Jan. 31st and Feb. 7th, 1891, Dr. Fenwick's valuable analysis of 1000 cases of ordinary lobar pneumonia demonstrated the advantage of cold in sthenic cases of that disease, and it was chiefly from the perusal of his paper that I felt induced to try the effect of cold in the present instance. This instance is the only one in which I have used it, because no other case coming under my notice has presented

grains of salol were administered for the former, and for the latter a broad piece of strapping was applied round the left half of the chest. This double relief procured him a fair night's sleep. A mixture was given containing quinine, iron, and nux vomica, with some liquor ammoniæ acetatis. During the next few days the physical signs became more developed. There was friction below and outside the left breast, while tubular breathing and bronchophony became marked over the back of the lung. Dulness finally reached as high as the spine of the scapula, accompanied by complete loss of vocal fremitus, weak breath sounds, and ægophony. The heart's apex could not be felt, but the right border of the cardiac dulness extended a quarter of an inch to the