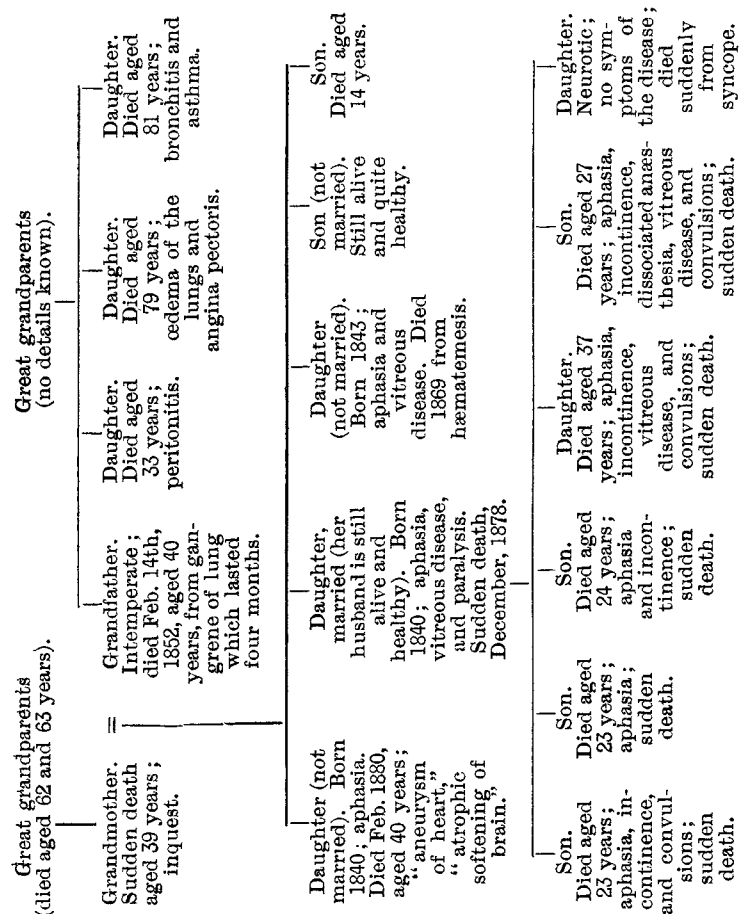


eyes; (4) loss or diminution of the senses by which pain and temperature are appreciated; (5) epileptiform convulsions; and (6) sudden death preceded by complete unconsciousness. The pathology of the disease in the only case in which there was an opportunity of examining the organs after death proved to be a spinal leptomeningitis which extended from below upwards until the cerebral meninges were affected in a like manner; the posterior columns of the cord and the posterior nerve roots showed well-marked degeneration.

The following family tree will show the number of children in each generation and the degree in which they were affected by the disease:—



The case here referred to is the daughter who died at the age of 37 years. She had suffered from vitreous opacities for nearly ten years and, like one of her aunts, had become quite blind before her death. In its general course the disease in her case resembled that of her mother and aunts, rather than that of her brothers, for the eye symptoms were prominent long before the more marked clinical features appeared and she lived to a very much greater age than any of her brothers, dying at the age of 37 years, while they died at 23, 23, 24, and 27 years of age respectively. This suggests a tendency on the part of the disease to take a different course in the two sexes, being more chronic in women, with at first much predominance of the vitreous disease, and acuter in men with early spinal symptoms. Ultimately this patient appears to have exhibited the complete syndrome of symptoms with the exception, perhaps, of the dissociated anæsthesia for she had frequent attacks of aphasia with loss of power in the right arm, convulsions of great violence and long duration, incontinence of urine (and finally also of fæces), and coma for some hours before death. It is unfortunate that no post-mortem examination could be obtained in her case to corroborate the pathological changes found and reported in the case of her brother.

Denmark-hill, S.E.

UNIVERSITY OF OXFORD: BOARD OF FACULTY OF MEDICINE.—The following have been elected members of the Board of Faculty of Medicine and will hold office until February, 1907: Sir William Selby Church, Bart., D.M., Christ Church, Honorary Fellow of University College; Walter Ramsden, D.M., Fellow of Pembroke College; Ernest William Ainley Walker, D.M., Fellow of University College; Walter William Fisher, M.A., Corpus Christi College; Samuel Hatch West, D.M., Christ Church; and William Bruce Clarke, B.M., Pembroke College.

## 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.

### BOLINGBROKE HOSPITAL, WANDSWORTH COMMON, S.W.

SOME CASES OF ABDOMINAL INJURIES IN CHILDREN.

(Under the care of Mr. HAROLD BURROWS.)

CASE 1. *Ruptured intestine*.—A boy, aged nine years, was admitted to Bolingbroke Hospital on August 22nd, 1903. 24 hours previously, while playing in the street, he had been knocked down by a brougham, both wheels of which, it was said, had passed over his body. The occupant of the carriage at once got out and inquired how much the boy was hurt, but he declared that he was not hurt at all and subsequently he walked home, a distance of a quarter of a mile. A medical practitioner who was requested to visit and to examine the patient was unable to find any evidence of a serious injury and assured the parents that there was no harm done beyond a few bruises. However, shortly afterwards the patient began to have pain in the abdomen which soon became severe; vomiting then commenced and was repeated at intervals throughout the night and the next day, and the abdominal pain became intense. On his admission to the hospital the patient was in great pain and was frequently retching and vomiting. He said that the shaft of the carriage struck his forehead—where there was a bruise—and that both wheels had gone over his stomach. His pulse was of small volume with a frequency of 128. The abdomen was moderately distended and rigidity and tenderness were marked. There was a bruise extending from the right hypochondrium to the left inguinal region. Light percussion over the region of the liver produced a tympanitic note. Perforated bowel was diagnosed and immediate operation was performed. A median incision was made above the umbilicus and gas escaped from the peritoneal cavity. There was diffuse peritonitis. About 12 inches from the duodeno-jejunal flexure the jejunum was found to be divided completely except for a strip of mucous membrane which remained uncut near the mesenteric attachment. Much bile-stained material had escaped into the peritoneal cavity from the bowel. The gut was united, the peritoneum was cleansed by sponging, and the abdominal wound was sutured. The patient did not rally and died 12 hours after the operation.

CASE 2. *Lacerated mesentery*.—A boy, aged five years, was admitted to Bolingbroke Hospital on June 9th, 1904, having been run over a few minutes before by a hearse which was carrying to the cemetery the body of a man who had died in the hospital. Mr. E. M. W. Hearn, the resident medical officer, at once diagnosed internal hæmorrhage. On the arrival of Mr. Burrows the patient was pale and collapsed with a pulse of 160. There was dulness in both flanks. A diagnosis of rupture of the liver or spleen was made and operation was undertaken at once. A median incision above the umbilicus revealed blood in the peritoneal cavity, but the blood was mostly below the transverse colon, and an examination of the liver and spleen proved them to be undamaged. The incision was continued downwards and the mesentery was found to be lacerated in no fewer than eight places, several of the rents passing completely through the mesentery, while the largest one extended from the intestine obliquely upwards into the mesenteric root. A large vessel was bleeding at the upper end of this rent. This vessel was ligatured and the three largest rents were sutured with fine silk. The feeble condition of the child made it undesirable to prolong the operation by sewing up the smaller tears in the mesentery. The small intestine was nearly empty and was uninjured. The abdominal wound was then sutured. Although it was feared that the bowel might suffer from injury to its blood-supply no complication of this nature

occurred. Recovery was uninterrupted and the patient was discharged on July 1st.

**CASE 3. Ruptured spleen.**—A girl, aged four years, was taken to the Bolingbroke Hospital on July 26th, 1904, with the following history. She was walking hand-in-hand with another child at a school treat when the horse in the provision cart took fright and bolted, knocking both the children down. A medical man was at once summoned and was requested to examine the patient's companion who had a bruised head but he was told that he need not trouble to examine the other as she was not hurt—indeed, she was sitting in a chair eating a piece of cake and looking quite well. Later in the day she complained of pain in the abdomen and became faint and was taken to the hospital. On her arrival there it was noticed that she had an anxious expression as though there were some abdominal injury. She complained of pain in the stomach and when asked to show where the pain was she placed her hand on the epigastrium. The abdomen moved freely on respiration, was soft, and the only physical signs discovered were slight dulness in both flanks, more marked in the left, and absence of free mobility of the left costal arch. The patient was not pale. The pulse was 140, the temperature was  $97.6^{\circ}\text{F}$ ., and the respirations were 32. Immediate operation was not advised but the nurse in charge was requested to keep a half-hourly record of the pulse-rate and to make known immediately any increase of its frequency. Throughout the night the pulse varied between 124 and 140 but at 6.30 A.M. the child appeared suddenly to get faint and the pulse was found to be 168, having been 140 half an hour before. On the arrival of Mr. Burrows soon afterwards he found the child collapsed. There were rigidity and tenderness in the left hypochondrium. The pulse was 176 and the respirations were 32. The abdomen was opened in the mid-line above the umbilicus and blood was at once apparent in the recess between the stomach and the transverse colon. The liver was examined and found to be intact. The spleen, however, was felt to be lacerated. The incision was extended to a short distance below the umbilicus. The spleen could now be brought to view and was seen to be torn in halves by a horizontal rent extending beyond the hilum. There seemed to be no bleeding from the lacerated spleen, but the patient was very faint, no pulse being manifest at the wrist, and the pedicle had to be drawn upon in order to bring the spleen into view, either of which circumstances might have accounted for a temporary arrest of hæmorrhage. The laceration was too extensive to permit of security from renewed bleeding together with conservation of the spleen, so this was removed. Three interlocking silk ligatures were passed beneath the spleen and tied and the spleen was cut away with scissors, a portion of its substance in the neighbourhood of the hilum being left in order to prevent the ligatures from slipping off. Blood was sponged out of the abdomen and the wound was closed. For 48 hours after the operation the child was in a condition of collapse with rapid feeble pulse and shallow respiration. She then began to rally and for the next nine or ten days was in a curious condition. She was dull, drowsy, and apathetic, but if thoroughly roused became irritable and frightened. The pulse remained rapid. On the evening of the ninth day after operation the temperature abruptly rose to  $103.2^{\circ}$  and the pulse increased in frequency from 92 to 168 beats a minute. The wound was healthy and no physical signs could be discovered which might account for the fever. On the following morning, with the view that the symptoms might be due to loss of the spleen, spleen extract and fresh bone marrow were ordered and one minim of liquor arsenicalis was also given three times a day.

The temperature gradually declined, reaching normal on August 10th, and the child's general condition appeared to improve considerably. A week later she was allowed to get up. She was now quite vivacious and appeared well in every way except that the pulse-rate was somewhat rapid. On August 24th the spleen extract was discontinued. On the following day the patient was listless, disinclined to play, and usually if spoken to would begin to cry. Next day there was more marked indisposition and the child was kept in bed and in the evening the spleen extract was resumed. On the following morning the temperature was  $102.6^{\circ}$  and the pulse was 150. In the evening the temperature was  $99.2^{\circ}$  and the pulse was 140. Two days later there was an evening rise of temperature to  $101.2^{\circ}$ .

Ten days after removal of the spleen enlargement of the lymphatic glands of the neck, axilla, and groins was noticed. The child was discharged on Sept. 1st, five and a half weeks after admission. She is now said to be in good health.

**Remarks by Mr. BURROWS.**—Abdominal injuries are always interesting and for this reason and also because they permit of some useful comment I wish to place the above cases on record. It is remarkable that in two of the cases—the torn intestine and the ruptured spleen—there were no symptoms to cause a suspicion of the grave injuries received until a considerable time had elapsed after the accident, and although similar cases have been reported before there can be no harm in emphasising their possibility by recording two so striking examples. For it is important to be cautious when called upon to express an opinion on a supposed case of abdominal injury. To give comfortable assurances to the relatives before a few hours have elapsed is to run the hazard of a loss of reputation which will very likely be accentuated at a subsequent inquest. While it is true that a grave abdominal lesion may be present without immediately giving rise to unmistakable signs of its presence, it is equally true that well-marked “peritonism” is not always an indication of severe abdominal injury. About the time when Case 1 was admitted to the Bolingbroke Hospital a little girl was also taken to the children's ward, having been run over in the street a few minutes previously. Her case forms a marked contrast with Cases 1 and 3. On admission she was pale and collapsed. The skin was cold and sweating, no pulse could be felt at the wrist, the respirations were very shallow, and it seemed as though the child were dying. That there had been some violence applied to the abdomen was manifest, for the right rectus muscle was partially ruptured above the umbilicus. Nothing was done beyond the application of hot bottles and other stimulants. A little later the child had rallied somewhat and the pulse, though very rapid, could be distinguished at the wrist. There now appeared great pain and tenderness in the upper part of the abdomen but the liver dulness was unimpaired and there was no dulness in the flanks. The pulse showed a rapid and continuous improvement and the respirations became deeper. On the following day the child appeared quite recovered except for tenderness in the place where the rectus muscle was injured. No further symptoms developed and the patient was discharged a few days after her admission.

Perhaps the different degrees of sensitiveness of the visceral and parietal peritoneum are sufficient to account for the unreliability of pain as a symptom in abdominal injuries. It has been shown that the visceral peritoneum is nearly insensitive and therefore injury to the gut or spleen without injury to the parietal peritoneum does not cause pain until peritonitis due to hæmorrhage or sepsis has ensued. The child mentioned above as a contrast case may have suffered from a tear of the parietal peritoneum without severe visceral injury. The conclusion to be drawn from these and other similar cases is that symptoms of peritonism do not justify an exploratory operation in cases of abdominal injury unless they persist or else are associated with definite physical signs such as loss of liver dulness, dulness in the flanks, or an increasing frequency of the pulse.

**Loss of liver dulness.**—There appears to be much difference of opinion among surgeons as to the value of this sign. The confusion is probably due to the different methods of percussion employed. Among 50 consecutive abdominal emergency cases which have recently been under my care loss of liver dulness on gentle percussion was observed in six only, and in every one of these six a perforation of gut other than the appendix was found at the operation or the necropsy. The six cases were as follows: two perforated gastric ulcers, one perforated stomach due to swallowing hydrochloric acid, one perforated duodenal ulcer, one traumatic perforation of the rectum (without a history or external evidence of any such injury), and the case of ruptured intestine referred to above. In no case where liver dulness was present was there a perforated gut (other than the appendix). In only three other emergency cases has there been absence of liver dulness, in one due to a stab wound of the left lung and diaphragm without intestinal injury and in the other two to pneumothorax. One of these is worthy of a brief mention. A boy, four years old, was run over by a cart. There was evidence that the wheel had passed over his epigastrium. The practitioner who first examined him discovered that there was no liver dulness and diagnosed

rupture of the intestine. However, the true nature of the case soon became apparent. There were no broken ribs and two days later the patient was quite well, although a few hours after the injury there was considerable dyspnoea and the respirations were between 50 and 60 a minute. Such cases are not very uncommon in children where injury has been received to the lower part of the thorax.

The following propositions with regard to loss of liver dulness appear to be warranted: (1) that if light percussion over the front of the liver yields a tympanitic note there is free gas between the liver and the percussed finger; and (2) that this gas may have escaped from lung or from stomach or intestine. The highest importance may therefore be attached to loss of liver dulness as a symptom in abdominal emergencies but the percussion must be of the lightest character. Heavy percussion will yield a resonant note over the liver in the absence of free gas if there be much intestinal distension. A tympanitic note elicited by gentle percussion is conclusive proof of the presence of free gas in front of the liver.

*Blood in the abdominal cavity.*—A striking feature of Cases 2 and 3 was the small quantity of blood found in the abdomen. Although there was sufficient to cause dulness to percussion in the flanks there was by no means a quantity proportionate to the constitutional symptoms of hæmorrhage. It seemed probable that though much blood had been effused it had been rapidly absorbed by the peritoneum. The remarks on the necessity for gentle percussion in testing the liver dulness apply with equal force to the examination for fluid in the flanks. Small quantities will be overlooked if the percussion is forcibly performed.

## Medical Societies.

### ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

*The Influence of Stigmata of Degeneration upon the Prognosis of Epilepsy.*—*A Group of Associated Malformations, including almost Complete Absence of the Muscles of the Abdominal Wall and Anomalies of the Genito-urinary Apparatus.*

A MEETING of this society was held on Feb. 14th, Sir RICHARD DOUGLAS POWELL, Bart., the President, being in the chair.

Dr. W. ALDREN TURNER read a paper on the Influence of Stigmata of Degeneration upon the Prognosis of Epilepsy. The purpose of the communication was to ascertain, by means of a statistical investigation, whether the presence of structural stigmata of degeneration exercised any influence, and if so to what extent, upon the prognosis of epilepsy. Stigmata of degeneration were defined as structural deviations from the normal, arising during the periods of development and brain growth, in those who were the subjects of a hereditary degenerative predisposition. 100 consecutive cases of confirmed epilepsy from amongst the patients resident at the Colony for Epileptics, Chalfont St. Peter, were examined with this object. The stigmata to which attention was especially directed were: (a) Facial, including nasal deformity and asymmetry. This was found to be more common in females than in males. Although present in 42 per cent. of the total number of cases it was only found in 14 per cent. as a single stigma. (b) Deformities of the hard palate. These form some of the most frequent and trustworthy of degenerative phenomena. Abnormal palates were found in 42 per cent. of the cases but only in 17 per cent. as a solitary stigma. (c) Deformities of the external ears, indicated by abnormal size, shape, and symmetry, were present in 33 per cent. but in only 9 per cent. as a solitary stigma. (d) Dental anomalies and displacements. Brief reference was also made to stammering and high errors of refraction as physiological stigmata. The statistical facts bearing upon prognosis were considered under the following headings:—1. Sex. Of 100 epileptics 62 were males and 38 were females. Males exhibited neuropathic stigmata to a much greater extent than females in the proportion of 52 males to 23 females. Of the total number of cases, males and females, 75 per cent. presented stigmata and 25 per cent. were free.

2. Hereditary history. Owing to the difficulty in obtaining precise and trustworthy information on this point it was not possible to deduce any general conclusions but it was observed that direct parental heredity to epilepsy or insanity was usually associated with more pronounced stigmata than collateral heredity. 3. Age at onset of the convulsions. Those cases in which the disease commenced between birth and five years of age showed a larger percentage of stigmata than at other ages. This was in harmony with what had been shown elsewhere that epilepsy commencing during the first quinquennium was characterised by the highest percentage of cases showing profound mental impairment and was most favourable for the development of the confirmed malady. 4. It was apparent from a study of the duration of the convulsions that the absence of stigmata did not necessarily imply an early or favourable termination of the disease. 5. The type of the seizures. The greatest difference in the proportion of cases with and without stigmata was observed in those which presented the combined *grand* and *petit mal* type. Such combination had also been shown to be associated with the highest grades of dementia. The purely *petit mal* type did not exhibit marked evidence of hereditary degenerative disposition. 6. The relation between the presence of stigmata and the *mental state* was especially obvious. Those epileptics who only showed the slighter degrees of mental impairment presented a nearly equal proportion with and without stigmata (21 per cent. with and 19 per cent. without). On the other hand, of those in whom there was marked mental enfeeblement 53 per cent. exhibited, and only 7 per cent. were free from, them. Hence there would appear to be a close association between degrees of mental impairment and the presence of neuropathic stigmata, a fact which was proffered as an argument in favour of the view that the interparoxysmal mental condition in epilepsy was an integral part of the disease.—Dr. C. H. BOND stated that although the epileptics in his charge at the Ewell colony were under the Lunacy Act his statistics on the questions under discussion bore a strong resemblance to those of Dr. Turner. He thought that additional value would be given to such statistics by mentioning the ages of the patients at which the various stigmata had been observed. An important advance would be made when congenital and acquired conditions of idiocy were separately dealt with.—Mr. STEPHEN PAGET asked whether the stigmata mentioned were related especially to epilepsy or were general in neuropathic conditions and what essential difference there was between the appearance of such malformations as had been referred to and the antenatal factors which lay behind variations in height and stature. He believed a certain amount of asymmetry to be general and the presence of badly formed palates and jaws almost universal in the London poor.—Dr. G. E. SHUTTLEWORTH thought that the presence of a single stigma was of little importance but the combination of two or three or more was certainly an evidence of degeneration. He agreed that the percentage of developmental defects was much greater in males than in females but that when they did occur in the latter they were likely to be strongly marked.—Dr. FLETCHER BEACH asked for Dr. Turner's experience of cranial abnormalities such as microcephalus, hydrocephalus, and changes in the skull as the result of paralysis. Had any cases of webbed fingers been noticed in the series of cases?

Dr. A. E. GARROD and Dr. LL. WYNNE DAVIES communicated a paper on a Group of Associated Malformations, including almost Complete Absence of the Muscles of the Abdominal Wall and Anomalies of the Genito-urinary Apparatus. Dr. Garrod and Dr. Davies described in detail the clinical features and the post-mortem appearances observed in the case of a male infant which presented a malformation-complex such as had been described in a few other cases which had come under observation in this country, in America, and on the continent of Europe. These cases had been collected and discussed by Stumme of Leipsic in a very complete monograph published in 1903. The deformities in question, which were evidently inter-related, included:—(1) Almost complete absence of the muscles of the abdominal walls; (2) hypertrophy and dilatation of the urinary bladder which had in most instances been attached to the umbilicus either directly or by a urachus; (3) a linear scar-like umbilicus; and (4) undescended testicles. In several cases, as in the one here described, there had been deep furrowing of the skin of the abdomen. Owing to the absence of