looking back on this case one wonders how an infant could possibly pull through such a prolonged and severe pyrexial disease. For twenty-five days the patient had high fever, and it was not till the 40th day that the temperature remained subnormal. There was no interval of apyrexia, so one may conclude that it was not a case of an early relapse, nor was there any second crop of spots. The most formidable complication was frequency of the stools accompanied by much straining which taxed the infant's strength sorely. In this case m ii of Tr. opii. in starch solution was given per rectum with beneficial effect. The infant had unfortunately been fed on undiluted milk for the first week or so of pyrexia before a Widal's test showed the real nature of the complaint, and to this fact I ascribe the irritable condition of the bowel which persisted in spite of a thorough (as far as could be safely done) eliminative treatment. Once thoroughly on whey diet the abdominal symptoms markedly abated. There were three small hæmorrhages, enough to make one proceed very cautiously. The infant ultimately made a complete recovery, having added to its stature in a most surprising fashion. I have noticed this marked increase in length in other cases, an increase which appears to be out of all proportion to the duration of time of the illness.

Conclusions.

The following are some of the facts that have been impressed on me as a result of the study of these cases of infantile enteric :—

(1) That enteric in infancy (by this I mean up to the age of two years) is by no means so uncommon a complaint as has hitherto been considered. I believe many cases of mild irregular fever are really cases of enteric, very mild clinically, it is true, yet none the less important when one comes to consider the spread of the disease. Certainly in native children in India it has been shown that they may contract the disease in such a mild form as to be running about and playing most of the time, in which case it is only too likely that the disease will be overlooked. Wheather European children get it so mildly is not a subject on which I am competent to speak. Personally I doubt it, the mildest of my cases have been severe enough to be confined to bed and treated as obviously "sick," and the severest of them have been exceedingly ill and given one many an anxious moment.

(2) That the *prognosis* on the whole is favourable, provided that the complaint is early recognised and the patient put under suitable "enteric conditions." With the aid of Widal's reaction now-a-days there should be no excuse in not diagnosing a case.

(3) That *whey* is infinitely the best diet for an enteric infant. Whey—good nursing—water—a minimum of drugs—sum up in my opinion the main features in dealing with a case of enteric, simplicity of treatment is thus ensured.

(4) Constant watching over the patient. Two visits a day is the absolute minimum, personally I prefer to see my patient thrice daily. In this way the slightest change can be noted and the onset of a complication forestalled or at least mitigated.

(5) That the length of the disease is more likely to exceed 21 days than not, and one must plan a campaign accordingly.

(6) That it is very unwise to prognosticate the cessation of the attack when the temperature comes to normal, no matter how gradually it may have done so. Irregular pyrexia for another week or ten days seems to be rather the rule than the exception.

(7) That in cases when a stimulant is needed, good brandy, not too much diluted, is the best restorative. In cases seen thrice daily, the effect of repeated small doses of brandy can be well watched and regulated if necessary.

(8) That complications of a serious nature are much less common than in the case of adults, especially when the "simple" treatment advocated above is adopted. Heart failure from prolonged pyrexia, is, I think, the chief thing to guard against, at least in this country.

In conclusion I may add that the use of Benton's Diet Sheets such as are supplied to many hospitals, is of very great value and service in attending a case of enteric fever. By its means one can follow the progress of a case hour by hour and each day compared with the state of affairs on the preceding one.

DELUSIONS IN YOUNG PEOPLE WITH SPECIAL REFERENCE TO THOSE DUE TO DEMENTIA PARANOIDS.

By G. F. W. EWENS,

MAJOR, I.M.S.,

Superintendent, Punjab Asylum, Lahore.

A DELUSION is usually decribed as an erroneous belief of the falseness of which its possessor cannot be persuaded of by reasoning nor by the evidence of his own senses, and which is contrary to the general belief of persons of his own race, age, standing and training.

A person who believes that he can raise men from the dead or one who states that he is a canary or another who believes that he has no feet, when obviously possessed of the usual number, can reasonably be said to be suffering from a delusion and from that fact deduced to be insane; though, on the other hand, it by no means follows that all insane persons have a delusion—very many have none whatsoever.

Delusions are, however, met with in a very large number of the different varieties of insanity, yet it may be said roughly that relatively they are most uncommon in young insane adults, and it is precisely to their presence in such people

in this country (India) that I now wish to refer to, and to call attention to some very striking examples that have lately come under my notice.

In India as a rule the persons most commonly exhibiting well marked delusions are those of middle age or advanced life suffering (1) from melancholia, whose erroneous ideas cause them to interpret their depression and misery as due to an imaginary ailment, or to some curse or spell put on them as a result of their own folly by a faqir, a pir, or other religious leader; (2) those affected with mania either "idiopathic" or of toxic origin, more especially when this has been prolonged and the acute motor and emotional conditions have subsided and a "chronic" condition remains; the delusions may be of any kind and on any subject; and (3) those cases of chronic systematised delusional insanity—the classical condition beloved of novelists—when a man otherwise to the world "sane" has some striking, coherent, unchangeable delusion governing his thoughts and conduct; and lastly in general paralysis of the insane among Europeans. It is not my intention to attempt a description of these conditions, but to refer to delusions in young insane adults in whom, as already stated, they are relatively most uncommon; but equally in whom we sometimes meet with most striking instances when the diagnosis of the affection causing them, and the prognosis to be drawn is often a matter of difficulty. These are chiefly due to the existence of a particular disease which is a variety of insanity termed somewhat uncouthly and incorrectly Dementia Paranoides, seemingly not yet sufficiently recognised here, and the one which I wish to attempt to describe.

In youth and in young adult life we do not meet with general paralysis of the insane nor with ordinary chronic systematised delusional insanity, and chronic mania in early life is *very* uncommon. Congenital idiots, imbeciles and persons of feeble intellect do not show delusions. These are, however, sometimes exhibited by young persons suffering from (1) acute (not simple) idiopathic mania, not at all a common disease in India where its feature of frequency, as seen in Europe and America, is taken by toxic (drug) insanity—the later condition being seen after exhaustion. A very striking example of their occurrence in this condition (idiopathic acute mania) was witnessed by me in a sleek Jat boy of 16, who asserted that he was the wisest and most beautiful specimen that ever lived, had such strength that he could lift a buffalo by his tail, could read any book in any language (he was quite illiterate) and could perform other wonderful deeds that I do not now remember. But such cases shew at the same time the peculiar undue restlessness and excitement, the rapid flight of ideas, sleeplessness and general loss of control which is characteristic of this malady, and their recognition is not matter of much difficulty. (2) (Indian Hemp) Toxic mania is very frequent in the young; to their unresistible restlessness, disordered appearance, insolent and bullying manner, their reckless violence, rage and noisy aggressiveness, their rapidity of speech and movement they sometimes add vague delusions of exalted power and strength, though these are much more frequent in the subacute or chronic form due to prolonged poisoning (never systematised). They are, however, in the chonic form much in the back-ground and far less evident than the complete disorientation and the vivid amazing hallucinations which are so characteristic of Dementia Paranoides; examples of these delusions are those of women calling to them, Goddesses, Kali and female Bhuts annoying, touching and speaking to them—the delusions when present are almost invariably in association with and arise from these causes. Still they do sometimes resemble the disease which produces delusions at the age of which I wish to speak. The following is a fair example of those seen after chronic saturation with the drug when the emotional condition has subsided, and a marked delusion influencing conduct seems the chief feature:—

L. R. This man after admission was recognised by a keeper as a distant connection who, after years of dissipation and indulgence in charas, had left his home and remained wandering for many months.

He came in the first instance to a European bungalow and demanded a talwar, as he said that he had a "mission" to use it on somebody—an attempt was made to secure him but he escaped. The next day at a railway station, however, he made the same request to a policeman who was fool enough to give him his sword, whereupon L. R. immediately cut down two unoffending men standing by. He was adjudged a criminal lunatic and confined here from the 15th September 1907. On examination he was a well-made young man, having a rather worn anxious expression with peculiarly irregular prominent teeth, very flat feet and very everted lips. It was most difficult to make him concentrate his attention. His speech was rapid and always had reference to some religious life, as to seeing his Guru and "praying for justice." In addition he expressed his belief that donkeys and many other animals talked to him and urged him to preach religion, that he was Guru Nanak's Chela and, therefore, had a mission to preach to anybody and also to use a talwar on anybody, and that all the Sahibs had given him an order to use one. He was clean in his habits and wore clothing.

He remained practically in this condition until April 1908 when he began to improve and by August was practically sane; early this year he has, however, relapsed a little and is now somewhat weak-minded, and his delusion or rather part of it, that he understands the language of

all animals, has again become prominent, but he seems to have no longer a desire for a talwar.

The next most frequent condition to toxic insanity here is that form of exhaustion psychosis seen in young and adult life when a patient, after anacute illness (often malarial fever) or childbirth, becomes what the majority of people are pleased to call maniacal:—being restless, absolutely unable to sleep, refusing all food, rolling from side to side, or, if able to do so, wandering about, never still or silent, shouting,singing, declaiming, naked, dirty, regardless of anything or anybody, insensitive to injury, cold or heat, and typically destructive, tearing in pieces all their clothing and indeed everything they can find. The majority of these patients are so noisy and excited that it is difficult to follow or understand them ; but many, perhaps all, do have delusions—they will tell you that their eyes have been taken out, that they are in somebody's house (they are always completely disoriented), that the men are women disguised, etc., etc., but these statements are not very prominent, being much less so than the hallucinations of taste, touch, hearing and their general restlessness, irritability and energy of declamation and destruction—so that they cannot well be mistaken. Cases of simple melancholia with delusions of having offended some powerful being, of being under a spell or ban, of being doomed to die, etc., do undoubtedly occur at this age, but you will almost never see them, for the simple reason that, being easy to deal with and not a trouble, their relations, with the dislike of any institution characteristic of this country, prefer to keep them at home. The meanderings of the rare epileptic who interprets the injuries he has received in his fits to ill-treatment by others excepted, you will find that having excluded these diseases (and some of the cases of chronic hemp drug insanity need very careful examination to prevent mistakes) all young insanes, coming to you with a delusion, are instances of a form of Dementia Precox, spoken of on the continent as Dementia Paranoides.

It is this affection, very many cases of which exist, that I particularly desire to allude to when youths or adults fairly quiet, and to untrained observation, "sensible," make on examination the most extraordinary and usually absurd delusionary statements. I do not mean to say that such cases never show any emotional disturbance, or any flightiness or absurdity ; they may have done so, most of them do, but the fact remains that a large number will only come under your observation when all this is in the background and forgotten or ignored by parental fondness, or, like most other facts of diagnostic importance, studiously concealed by those obliged to bring them. In these patients their absurd delusions combined with their quiet demeanour and passive bearing is often very striking. It will usually be found, however, that the delusions are based upon and seem to arise from hallucinations, and this fact, together with the demeanour and conduct of the patient and the rapid and progressive failure of intelligence and volition they exhibit, if watched for any time, is very characteristic and typical of the disease under discussion.

This Dementia Paranoides is briefly a disease of early adult life in which a progressive diminution of intelligence and failure of judgment and reasoning is very prominently marked at first by its association with delusions. These delusions are formed on a basis of the hallucinations that are an essential feature of all three varieties of Dementia Precox. They are absurd in character, often changeable never systematised, and, later in the disease, fade very much into the background and may practically disappear.

The malady is of rapid course (two years usually being sufficient for its full development), and it is absolutely incurable. There is generally a markedly neurotic family heredity and "stigmata" are frequent. What usually happens is that a young person becomes changed, he may have been always shy and reserved, but he now seems more so; he is altered and, in particular, he cannot follow his occupation though he does not, like a melancholic, plead illness as the reason but rather gives none and wanders stolidly idly about. If a student he leaves off reading and attending classes, if a zemindar he cannot labour but wanders aimlessly about or lies idly aside—if remonstrated with he does not excuse himself but seems indifferent—very frequently he wanders away from home, and it is for this reason usually that he is brought for treatment, as it is to an ordinary native's mind *the* most incomprehensible act and one savouring strongest of lunacy.

Often also you will be told that it is on account of having done some foolish and particularly silly act (tied his little brother up in a parcel—gone into a dispensary and locked himself in—climbed up a signal post and taken down a lantern—gone to sleep in a guard's van—all of which are actual instances that have come under my observation) which necessitated his examination—I say he for though this disease is stated to be commonest in women it is invariably in the male in this country. He is usually a stolid well-nourished youth, very dull with absolutely no knowledge of his disease, showing the marked apathy characteristic of it, an indifference to everything, a want of energy with a general untidiness of person and dulness of manner. Question him and he will calmly tell you (not gratuitously like a maniac and not blusteringly like an Indian Hemp case) that he can transform any object into something else ; when asked how he knows that, he will answer that it is because he hears folk behind him telling one another and the world in general that he can—and this association of delusions with the hallucinations from which they arise is very characteristic and almost invariable. Or, another will inform you calmly, or at the most

with a silly grin, that his own feet do not belong to him, that one is a Bengal foot and the other a Bombay foot, and, he knows this because he "sees always a child's foot" before his eyes. Or, another will say that he never was born, he "grew"—can make men out of dirt, has made more than he could ever count (*beshumar*), can make gold out of dust. That he is a Mahdi, that God appears to him at night, and says so, that the angels come to him, etc.

The delusions are always absurd, they are never clearly marked out, there are usually several, they are always *plus* hallucinations and often show a tendency to change and vary. With all there is no emotional change, the youth is impassive, quiet, never angry or very sad, he may indeed in some cases have an air of reserve of power and knowledge, but in general the aspect is that of a dull apathetic youngster, indifferent to everything. The mouth is open, he makes no effort to hold himself upright but lolls about, and in the asylum never asks to go away or to see his relations and, while you talk to him, asks for nothing. A little conversation will assure you that judgment and reasoning are indescribably feeble, and yet you will be struck with the fact that his memory is usually excellent, that he understands perfectly all that you say to him, that he will listen quietly to you, and that he is perfectly oriented (very unlike a case of toxic insanity), that he knows where he is and by whom he is surrounded and that he is perfectly clean. That the reflexes are normal, salivation is not in excess, and there is no apparent defect of sensation. Keep such an individual under observation, however, and in the course of a few months you will see him become, week by week, progressively more stupid and duller, more indifferent, apathetic and feeble-minded, while coincidentally the delusions seem to fade or, at any rate, to become less obtrusive and often to require close questioning to elicit. Rapidly he will attain the usual condition of advanced weak-mindedness seen as the terminal stage of Dementia Præcox, though there are not as a rule the filthy habits so often met with in these cases, nor are there the frequent outbursts of destruction and wild excitement seen in the ordinary forms of that malady. In this last stage, without any will of his own and unable to provide for himself, he becomes a foolish drudge without desires or volition and will remain in that state until carried off by some intercurrent disease. And it may roughly be said that the more prominently associated and the more varied the hallucinations are, the more rapidly does the disease progress to this condition; for some of these cases are seen, and are then very striking, where hallucinations are much in the background and require great care to elicit—they are always present. In these the delusions are more marked, more especially so, as the amount of intellectual impairment is not so evident, and the delusion is so much the all-pervading feature, that these cases exactly resemble the ordinary form of Paranoia (chronic systematised delusional insanity) though there is not the marked suspicion, nor feeling of exasperation at persecution and annoyance so characteristic of the latter; (but it must always be remembered that cases do occur if this disease commences at an early age). The absolute non-existence of hallucination and apparent retention of perfect intelligence would then be the only certain means of diagnosis from the preceding. One or two cases also have come under my notice, in whom the affection seemed to remit for a few months with cessation and, in one case, concealment of the delusion; but, speaking generally, as already stated, this "Dementia Paranoides" is absolutely irrecoverable from. I give a brief epitome of a very fair example of the malady which will show the senseless delusions of these people.

G. M., a Kashmiri, settled in Amritsar, was admitted here as a criminal lunatic charged with attempted housebreaking, having been found on the upper story of a house at night. The crime was soon explained on his arrival, for it was found that his one and all-absorbing idea was to climb to the roof of any building and destroy the tiles. He was a pale, very stupid, dull youth, most difficult to arouse. He had peculiarly large ears, each of which possessed marked Darwinian tubercles. On conversation he explained that a Geeda Singhia species of plant, that certain Indians carry apparently as a "mascot," had changed his name, "that the Amir of Afghanistan had troubled him," that he saw Mecca at night—every night—had seen every country "Pindi, 'Room' and Kashmir," etc., etc. It appeared that he had wandered away from home, given up work, and had previously been gradually becoming stupid and had had occasional fits of destructive violence in which he had destroyed his clothing and bedding. In the asylum he was very stupid and dull, could not learn any trade and was frequently dirty in his habits, but he was oriented and had a good memory. He was always, as already mentioned, climbing to the roof.

During 1907 he gradually became more stupid and dull, and has been for some long period dirty and apathetic, with an occasional foolish smile, the only sign of intelligence, usually standing about wrapped in a blanket, indifferent to everything and obeying anybody. His delusion had faded and left him in about six months after his admission.

The next is equally characteristic.

M. A., a medical student brought on 30th May 1908 by his father who complained that for the last three months he had refused to live with his parents, had left his home and ran away, having previously relinquished his studies. The boy gave as his reason that his father had "turned against him." On arrival, M. A. a quiet, tidy, very apathetic youth, declared in an indifferent manner that he had "spiritual power" by which

he could turn men to stone, that he could make a table into a cannon—had frequently done so, and continually heard people in the streets behind him asserting that he could do so.

He remained in the asylum for some few weeks, always the same frequently a little self-satisfied and smiling but, otherwise, indifferent and dull. At the earnest request of his father the latter was allowed to remove him but, within a week, he again left his home and was next heard of as having started for Cabul, as a spirit had told him that he had a mission to show his wonderful powers to the Afghans. Since then naturally no further news has arrived of him.

In conclusion I give a brief summary of a case, interesting both from the fact of the delusions being all apparently unaccompanied by any other intellectual disturbance, and the difficulty there is still, after prolonged observation, of deciding whether it is really a case of chronic Indian hemp poisoning or one of Dementia Paranoides undergoing a remission. It is that of B. R., a young Khatri, aged 20, a clerk in a Government office, who was admitted here on 9th September 1908.

This man was found by some others to have suspended his little sister, aged 7, by the feet, head downwards, to a mulberry tree near the river—was swinging her backwards and forwards, "the girl was naked except for a small handkerchief round her waist"—"she was crying." The men told him to desist but, as he only replied I am doing my business and continued as before, they took the child away by force.

B. R. then tried to jump into the river but was prevented. He was in consequence brought here. His case is complicated by the fact that it appears that, for a long period, he had been taking *charas* to excess; but it is significant that he had done no work for two years, and that his family stated that he was in the habit of giving "much trouble" at home.

He is a slender young man, perfectly quiet and collected, answering all questions readily, clean, respectful almost servile—oriented as to place, but quite unable to give the date or day of the week—well behaved. He had perfect memory of all that he did to his sister, so that it was obviously not an act done in *charas* intoxication. On questioning he states in a quiet collected manner that he did this to her "for her good" to prevent her being wicked but cannot explain himself. He has a delusion, that is difficult to understand, about "*ilim*" or something inside him which orders him to do various acts; he also declares that he receives direct orders from God to act in a certain manner, that he can show God to anyone in about a week's time, that he can absolve anyone from their sins and that "all men know this." But apart from the delusions and his accounts of hallucinations of hearing, he speaks perfectly sensibly, has good memory, complete control over his attention and can understand all said to him. Physically he is well made, almost good looking, but the two sides of his face are slightly unequal and the right occipito-parietal region is smaller than the left. The ears are very outstanding, the left more so than the right. The feet are flat and there is marked hyperextensibility of the fingers, and there is a little congestion of the conjunctivæ, limited to the exposed parts such as is common among consumers of Indian hemp.

No family history is obtainable.

He has remained in the asylum to the present time quiet, well behaved, clean and sensible with no perceptibly weakening of intellect and has indeed lately denied his delusions, but his manner and his obvious desire to escape from the asylum lead one to suspect that he may be concealing these latter. He now has apparently lost his hallucinations, and the interest he takes in his future is very unlike the usual habit of any sufferer from Dementia Precox.

SPORADIC KALA AZAR IN BEHAR.

By F. MILLS,

Military Assistant-Surgeon, Pusa.

That Kala Azar exists in an endemic form in the province of Behar, there can be no shadow of a doubt; that its prevalence has not been generally recognised nor mortality from this cause noted is also evident, from the fact that, as far as I have been able to ascertain from enquiries made, the neighbouring districts do not record any authentic cases. Major Rogers speaks of it as occurring "less frequently in Behar," and Dr. Basu of Patna mentions having seen some cases from Mozafferpur amongst his out-patients. Colonel Lukis, in his report of the Medical College Hospital for 1908, also records one case from Behar. The death-rate from malarial fevers in most districts is usually high, and it would be interesting to know to what extent unrecognised Kala Azar contributes to swell the totals. Many of the thousands of patients annually passing through the various dispensaries and treated for malarial fevers and malarial cachexia would, on a more careful study of their clinical symptoms, no doubt prove to be cases of advanced Kala Azar.

My attention was first directed to the possibility of the disease existing in these parts from the fact that, of several cases treated in the out-door department of this hospital for so-called malarial fever, the peripheral blood in 33 per cent. of the patients examined showed no malarial parasites, and in some of these the fever was resistant to the action of large doses of quinine. This led to the suspicion that other factors than malaria might be responsible, and careful observations made since March 1909 served to confirm my suspicion. In March one case was admitted and kept under observation till the date of his death, and, though the diagnosis could not be verified by spleen puncture,