Idiopathic intracranial hypertension could be mere a chronic active bacterial encephalitis.

Abbas Alnaji*

Consultant Neurosurgeon, Al-Sadir Teaching Hospital, Iraq

Abstract

Over more than fifteen years of my Career in Neurosurgery I focused my efforts on the causation of surgical pathologies (biological bases). Idiopathic intracranial hypertension is embarrassing, that whatever the neurosurgeon does, still some end with big disability, the blindness. My vision is based on two, first, as the histopathology of brain parenchyma say presence of long standing water in extracellular spaces without trauma or toxins, the logic explanation for that is the chronic inflammatory process. The second base, I concentrated on the patient as a whole rather than on CNS only trying to discover the relation between this CNS inflammatory process and presence of any systemic disease which make this CNS impairment as a complication to it. By taking a strict history, systemic review and physical examination I concluded the presence of a chronic or sub-acute general disease which in my career it was chronic Brucellosis however (pre-PCR era in Iraq) serology is negative in most, for that anti Brucella trial treatment was adopted to result in a very high success rate in mild to moderate cases which are several tens in number, three severe cases who end with blindness then regained their full vision over the last ten years. Complete work up done to exclude other entities, fundus camera to register and follow optic disc edema or atrophy…

Keywords: Idiopathic intracranial hypertension, Benign intracranial hypertension, Pseudo tumor cerebri, Brucellosis, neurobrucellosis, Encephalitis, Biological bases of symptomatology, Comparative pathology, Internal energy, Natural systemity, Equation of creation, Granulomas, Tumor like tissue, CT scan contrast, MRI contrast, Spine Brucella, Trauma, System designed capacity, Sick cell syndrome, Stroke.

Accepted on May 08, 2017

Introduction

Idiopathic intracranial hypertension IIH is not uncommon especially in females all over the world. Many nomenclatures were given to show to how extent the etiology is obscure! Standard medical treatment is directed to the findings not to the cause steroids, diuretics, analgesia and if any others. Surgical measures are not so far from the medical in principle and results. Patients either continue to suffer Inspite of what has been done medico-surgically as chronic headache and other mild manifestations or get blind. No substantial improvement on the standard management over the past 25 years since I was neurosurgical resident. A nine years old female suffered from chronic head ache elicited a fact in my mind this IIH could be a secondary to some systemic infectious disease, this was in second half of the 2006 in Al-Zarkaa teaching hospital in Jordan where I worked for one year. This nine years old female came with a moon face due to a high and long-standing steroid she was on. So, she was diagnosed as IIH by some specialists, of course she was being worked up to reach this conclusion. This patient was feverish, as steroids encourages secondary or opportunistic infections I tried to discover this entity, by taking detailed history and systemic review I reached to the fever is pre-headache and steroid stages, and it is undulant and periodic with history of acute febrile illness I do not remember how long it was. As I treated in Al-Basheer teaching hospital Amman, Jordan in the first half of 2006 several hundreds of low back pain sufferers as a Brucella spondylitis where they were treated as a standard treatment for osteoarthrosis or spondylosis with non-steroidal, sedation, physiotherapy, sick leaves for rest- and cyanocobalamin, it was every day outpatient clinics as two rooms open to receive about fifty patients per day the majority of them were with low back pain. My share was two clinics per week. The number of patients decreased dramatically when I started anti-Brucella based on clinical ground, this decrease in number is due to improvements without the symptomatic treatments they used to be given. So, Brucellosis is endemic in this community. For that I considered this child have chronic Brucellosis, her condition is a complication to a neurobrucella so I had better not to start any surgical intervention and wait to see the results of anti-Brucella. Head ache, intermittent fever and papilledema resolved gradually over three months, with steroid tapering as she is getting better. Her blood serology was negative for Brucella from the start (CSF not done due to critical situation of her condition), PCR was not available at that time.

Patients and Methods

As I mention earlier in the introduction, the endemicity and the positive results of this child made me concentrate in the subsequent cases to find any similarities. For that every newly diagnosed IIH case by me or already treated by the others and come to seek my advice are evaluated not in isolation from the

rest of the body. My attitude became looking for symptoms and signs referring to a systemic illness from 2006 to date, the number of mild and moderate cases is several tens, the severe cases are three one male 55 years old and two females in twenties of their age they came to seek my advice, male with no light perception blindness, females with shadow perception. They were treated in several medical centers with all medical modes but no surgical intervention. One of these blind females underwent PCR for her CSF which was positive for Brucella. A one non-blind female of middle ages her fine needle aspiration from Trapezius muscle was PCR negative for Brucella but excellent response to anti Brucella regimen (updating of results). PCR not done for all patients due to high cost and due to my attitude by taking Trapezius muscle open biopsy after I experienced the high negativity of blood sample with PCR against very high rate of clinical trial with anti-Brucella. Also, I stopped fine needle aspiration from Trapezius muscle due to high negativity in IIH and other conditions under investigation to such principle. Standard tube serology was out of date very early in my work. ELSA of Brucella is 20% positive in cases who showed a complete clinical improvement with anti-Brucella so ELISA became out of date in my work since several years.

Results

Gradual but dramatic improvement on anti-Brucella treatment for the mild and moderate cases the extra IIH symptoms also fade out in a matter of 2-3 weeks or slightly longer in less than 50% of patients which cross the one month. As for the three severe cases the 55 years old man with light perception got his vision gradually over 6 months of different courses of anti-Brucella to avoided resistance. The other two females got their normal vision in 2-3 months. Ofcourse, the other symptoms disappeared too. Without any steroids, those whom already on steroids tapering starts on first sign of improvement with anti-Brucella.

Discussion

Many factors had been correlated to the causation of IIH, the pathology is extracellular brain parenchymal excess water (edema). No patients had all of these correlation factors while all share the same pathology. Some patients have no any of these correlation factors! As I realized from the case of the child of nine years old (first case in this vision) to be of Brucellar origin, I decided to use the oldest anti-Brucella regimen which is doxycyclin and co-trimoxazole. Doxycyclin, is one of these correlation factors which is mentioned in textbooks to be a cause to IIH, I were intentional to treated this case with such regimen for two causes, the first is just to prove when this child patient got improved this is most likely a case of chronic brucellosis because such regimen of doxycyclin and co-trimoxazole is confined to Brucella however some text books of medicine add third generation cephalosporin to the cases of neurobrucellosis, which is the cause to our topic, IIH. So IIH is a remote complication to neurobrucellosis which in its turn a complication to a systemic chronic brucellosis. Secondly, doxycyclin and others are not the cause if this child got better while she taking it. Chronic brucellosis clinical picture is the sum of multi systemic complications. The spectrum of pathologies caused by Brucella is far more than *Mycobacterium tuberculosis* (M tb) were for example M tb dose not causes brain parenchymal inflammation (encephalitis) while Brucella do. M tb does not cause peripheral mono or multi (poly) neuritis while Brucella do. M tb does not cause myocardiopathy while Brucella do. M tb causes caseating granulomas while Brucella causing non caseating granulomas of any kind and a non-granulomatous tumor like cellular masses that take dye in both CT and MRI contrast studies that misleads to the diagnosis of a tumor whether a benign or malignant especially in spine. The list does not end by this, it needs a special stop in another occasion. Here I concentrate on a fact, it is; we have to consider the basic clinical practice examination in every case whatever it is, not to look at it from our eagle nest as a top clinicians where become happy to consider headache as a IIH, the situation become worse if the surgeons like me focus his attention only on the words written in the paper of transfer mentioning a clinical diagnosis with the failed medical management, signaling the start of surgical tools to move to work. By simple logic, headache is not a disease and the presence of extra water in brain is also not a disease, so we have to construct a disease according to the primary medical teachings. Philosophically what is causing the disease??!! The tumor, trauma, inappropriate nutrition, hereditary, no, not any of all… it is the microbes and the microbes only. In one of my discussions with a consultant general surgeon working in national health of one of highly developed countries I commented on his objections by 'dear the era of microbes had been discovered!!'' he stops speaking and gazed in my eyes astonished, you have to guess why!! The subject I were discuss with this consultant is about the *biological bases of symptomatology* after his brother had been suffering from progressive unilateral scapular muscles pain and tenderness for nine months interfering with his sleep and the usual daily activities got dramatic relief on anti-Brucella, in a time all the modalities of classic treatment had been given by the consultant to his brother were uneventful. Here, I would like to comment on the trauma as a causation in a disease. Trauma is a physical event, a force (energy rather than force is nearer to the nature of things), the body subjected to this force in many forms, violence as in road traffic accident, falling from height or many other similarities, the other is the force of work or the occupational hazards where this force of energy directed to the body from environment in a ongoing pattern (including housekeeping acts). If the body is free of the potential, sub-clinical, sub-acute chronic active intracellular bacterial infections this force would will not harm!! You find some whom asked me if one had a burn or broken bone due to car accident and he/she suffering from pain is this because of bacteria?? And you look for a radical treatment? for their knowledge I not use symptomatic treatment at all trying to discover the cause and treat it !!! I do not in need to say how much they are away from my attitude. I think the concept of '' *comparative pathology''* is suitable to discuss the role of trauma generally and in our topic, IIH. One of correlations in IIH causation in classical teachings is history of trauma. *Comparative pathology* takes simple and common phenomena known to all levels of population as examples or guide lines to bring interpretation to the other hidden pathologies or say diseases. The most common or popular phenomenon, is the tooth conditions. When teeth are healthy and sound one can break a nut with hard shell with his/her teeth. While it became

aching in deferent scales when they are inflamed or have carries or more simply if they diseased. Teeth if diseased will aches even with a soft bread with a slow cautious mastication. A mildly cold drink makes them ache in a time if they are sound you can eat an ice-cream with them. Carries is no more other than a bacterial effect on tooth enamel and dentin to be lysed to make sensitive nerves bare. These nerve endings sensitized by slight energy of mechanic as eating and temperature by cold or hot drinks and osmotic force by sweet. If these nerves got inflamed suffering will happen without a stimulus and it is parallel with the bacterial inflammation magnitude. The same is not so far from the above doctrine. Trauma in general if not exceeds the *system designed capacity* will do transient changes if any. In a potentially impaired system because of it had been violated by some invasion, you find this system is fragile, fragile due to its internal energy had been exhausted by long standing loss or irritation of natural systemity (systemity; is the equation of nature with which a system had been created as hard- and soft-ware). Again, this internal energy is run and managed by a strict economics. We can term it as the ''economics of the body'' where no single event in the body (as in our universe as well) do not obey these rules. Here the invader does not deviate from this principle, it has its internal energy too. So, the summation of these two energies will be in a certain coordinate. As we used to say right and left, the right is the good and in our nominated favor while the left is the opposite or the reverse. Here we are talking about the reverse direction of the coordinate because the science of pathology and medicine we are in its respect is dealing with. The role of internal energy is to organize or control the body reaction toward the action the body do subjected to in its environment, as the body is made of a structural and the functional units, the *cells,* so we expect that we are talking about the cell internal energy! That is right, but the concept of internal energy is not limited to the cell and its internal structures. The same as to the tissues which are by this equation had been designed to form the organs. The organs with the same manner and internal energy forming the whole body (here I am talking about humans, where suffering from IIH our topic for this article, however the principle of internal energy applicable elsewhere in the biological and non-biological systems). From the above the invader-host interaction is interaction on their internal energies level. In our case there will be a depletion in host energy as this host is the cell, so cell will no more can keep its internal environment in the face of trauma which is a form of physical energy, Sodium-Potassium pump is an example of the host functions that needs energy, any change in the pattern the fueling of the needed energy will end in some impairment in this Na–K pump which results in extra water in space it should not be in the amount it presents in IIH. The above description is somewhat vague and wild, that's to say, we want to know the exact role or effect of energy on the cell as a building unit and its sub-, and extra-, structures. By this we can say the invaded brain parenchymal cells (neuron, galia or even capillary endothelium) are sick cells either overtly as patient complaining what so ever, or occultly that's mean it is potentially deranged cells and the trauma or other factors had evoked the dysfunction which resulted in the IIH clinical entity. This bring us to concept of *sick cell syndrome* which I no more hear about it recently.

Conclusion

From the large number of mild and moderate cases who became better on anti-Brucella together with the three cases who are regained their normal vision on this bases after the gradual loss while on standard treatment. We conclude IIH is a remote complication to a chronic systemic infectious disease in most or in all.

The other important point we have to know from the above discussion and analysis is that the physiotherapy and rehabilitation should follow the removal of a cause even in stroke patients where it is mentioned in the primary level textbooks of medicine that Brucella is one cause of a stroke in addition to thrombosis and hemorrhage, here we need to stop so strongly. How much the incidence of Brucella among other causes! Do Brucella do these embolic and hemorrhagic strokes ?? !! because if the stroke all is due to Brucella and may be other pathogens, do we think this infective process vanished when the patient became stable, or physiotherapy and rehabilitations only whom made him well!! I am working in a board license or degree giving center of all medical and surgical fields, no body consider this fact because we are follower to other standard centers in some place of this world whom they in turn this fact not in their attention. Stroke, is one example, there are so many.

Recommendation

As it is important to direct the call to cooperate with interested workers to widen the work spectrum in this concept of IIH as being a complication to Brucella or other intracellular bacteria, I take this opportunity to invite the research centers to cooperate to reveal out the role of energy on the cell.

***Correspondence to:**

Abbas Alnaji
Consultant Neurosurgeon
Al-Sadir Teaching Hospital
Iraq
Tel: 09647700059052
E-mail: abbasalnaji@yahoo.com