CASE REPORT

VITAMIN THERAPY IN PINK DISEASE (ACRODYNIA)*

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Only a few cases of Pink disease (acrodynia) have been described in the Indian medical literature. CHAUDHURI reported two cases in two brothers in 1934 and another in 1943. WIC and MANCHANDA described one case in 1946. Apart from these four cases, we could not get any other reference in India. Pink disease, however, is not a rare disease. More than 1000 cases have been described in the world literature since its first description by SWIFT in Australia and FEER in Switzerland. The two cases are reported below with a view to draw the attention of the medical profession to the incidence of this disease in India, and to the newer methods of management which yielded very satisfactory results.

REPORT OF CASES

Case No. 1.—A boy, aged 3 years was admitted to the Pediatric Section of the Medical College Hospital, Calcutta under Dr. CHAUDHURI on March 12, 1948 for the following complaints:—(1) Cold, clammy and red extremities, both upper and lower, (2) swelling of the hands and feet of 2 years' duration, (3) irregular stools, (4) inability to stand, (5) irritability, (6) photophobia and (7) scaly eruption of the skin, (8) excessive salivation.

Family History.—Nothing suggestive could be ascertained.

Personal History.—He is the youngest of three children of his parents, born at full-term. He was entirely breast-fed for 3 months. He was vaccinated against smallpox.

History of present illness.—His people said that the child had itching all over the body at the age of 3 months. Soon after he had fever because of an abscess in the axilla. About six months ago the child complained of pain in moving hands and arms. Sometime later

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both the upper and lower extremities became swollen ; he was unable to stand or walk. During the course of subsequent weeks, he developed sores in the hands and feet which extended all over the body. He was taken to a hospital where he received several injections of bismuth. About this time he was supposed also to have suffered from kala-azar.

On examination.—A very peevish child lying with his head burrowed in the pillows ; and was unable to look at light. The musculature was fairly developed but hypotonic ; extremities were red and swollen but did not pit on pressure and the trunk was full of marks of sores ; eyelashes have fallen ; and he appeared to be very sullen and irritable He was pale but there was no icteric tinge. Tongue was moist and coated. Tonsils were congested. Teeth and gums healthy. There was nothing abnormal in the chest or abdomen. Extremities were very cold, moist and erythematous, finger nails and toes were blue, and showed slight excoriation. Knee-jerks were present, pupils equal, reacting to light. Babinski's sign positive. His body weight was 16 lbs. Pulse rate was 140, respiration rate 40 p.m. The child was unable to sit or walk. He resented anybody approaching him.

Laboratory Findings.—Blood: R. B. C. 4 mill per cmm. Hæmoglobin 65% (Sahli), W. B. C. 10,400 per cmm. of which 75% were neutrophiles, 23% lymphocytes, 1% monocytes, 1% eosinophiles. No parasite was detected. Stool and urine nothing abnormal. Wassermann reaction—doubtful.

Progress and Treatment.—The child was put on a milk diet which was gradually changed to mixed diet consisting of 3 feeds of whole milk, and two servings of rice, vegetables, fish and *dal*. Besides, he had fruits and helpings of fruit juices. He had daily injection of 1 c.c. each of hypo-beta and 10 mgm. thiamin chloride. He had also vitamin B_6 and vitamin C. He took 90 Binadon tablets, (20 mgm. Pyridoxin) a day. Elixir Vit.B complex, one teaspoonful twice daily for 2 months. No hypnotic was given.

After a week's treatment the child appeared to be less irritable and attempted to sit. He could not look at the glare yet. After a fortnight, erythema of the legs started getting less, and the extremities became warmer. Gradually he took interest in his surroundings, and could stand with support, his sleep was also better, he smiled and played. In six weeks his improvement was marked ; he gained in weight, his bodyweight being 24 lbs. His behavior was more like a normal child of his age, but still unable to walk without help. He was discharged at this stage.

Case No. 2.—A girl, aged 2 years was brought to my office on February 1, 1948 for the following complaints: (1) Impetigo of lips with stomatitis, (2) extensive salivation, (3) irritability and crying, (4) lack of growth, (5) sleeplessness, (6) falling of 12 teeth, (7) coldness and redness of legs and (8) gradual wasting.

Family History.—Nothing of importance was ascertained.

Personal History.—She is the youngest of the two children, born at full time. She was breast fed for 6 or 7 months. She sat at 7 months, started walking at 12 months and cut her first teeth at 6 months. She was vaccinated against smallpox.

Past Illness.—She suffered from an infection of the umbilicus, with sores and rash all over the body. She had gastro-enteritis following which she had kerato-malacia.

History of present Illness.—The child developed high fever for 5-6 days associated with a boil on the back, when she was about 1 year old. This was operated and the fever subsided. Since then she became more and more irritable and peevish, the extremities became red and cold and she disliked walking or playing. It was followed by loss of teeth in rapid succession ; there was no bleeding from the gums but the teeth became loose and started falling. She then developed loss of appetite and sleeplessness. Excessive salivation from the mouth started ; lips and tongue became excoriated and linear fissures appeared at the angles of mouth ; sores spread all over the body ; the condition continued to get worse. She screamed throughout the night and was a most miserable child. Parents appealed earnestly for some relief to the child from this pathetic condition. They added that she was a very cheerful baby and they were shocked to see this phenomenal change in the child during the last year. They showed her to many doctors without much benefit to the child.

On examination.—A very thin child with a miserable look ; the extremities were cold and reddish-blue ; musculature was flaccid ; her facial expression was of great distress ; eye lashes had fallen ; slight excoriation of the eyelids ; salivation from the mouth was excessive, linear rhagades (fissure ½-1″ in length) radiated round the mouth to the cheek. She could not look at light. Twelve teeth were missing. The skin was cold ; desquamating and dry sores were present on the trunk, nails were rough. The child was extremely peevish, and resented violently any approach or examination. Nothing abnormal was noticed in the cardiac or respiratory system. The abdomen was sunken ; the liver and spleen were not palpable. The musculature was very hypotonic and turgor was bad. She could not stand. Knee-jerks were absent. Her weight was 18 lbs. only.

Progress and Treatment.—The child was put on liver extract (Combex, P. D. & Co.) and Vitamin B. complex injection 1 c.c. each daily. In addition she had 10 mgm. thiamin chloride parenterally. She had a total of 48 injections. A week after the institution of the vitamin therapy, her demeanour changed and she could sleep and did not scream so much at night, although no sedative was given. Previous to this method of treatment she used to get two Soneryl tablets without effect. A month after the treatment she improved considerably, the

limbs became warm, sores disappeared both from the mouth and the trunk. She was more cheerful and took her normal diet, consisting of 3 feeds of milk and milk-products, and two feeds of rice, vegetables, fish or meat or egg. She had also fruits.

Follow-up.—On July 23, 1948, she weighed 30 lbs. She was a perfectly normal child, cheerful, and moving about in joy. All the sores were healed ; only faint scar marked the site of linear rhagades round the mouth. She sleeps well, has good appetite and plays with other children. The limbs are no longer cold and red.

Discussion

Since the original description of Pink disease by Swift and Feer, many clinicians have described this condition in Europe and America. In India, Chaudhuri reported in 1934 two cases. Two other cases were reported later, one by Chaudhuri in 1943 and one by Wig and Manchanda in 1946. The first two cases of Chaudhuri occurred in a family. Familial incidence was not noted before. Only two other instances of familial incidence were reported by Wood in his series of 150 cases since then.

Pink disease represents such distinctive features that anybody coming across a case feels that he is confronted with a definite symptom complex, though he may not be able to label it. The essential features of this disease are that it occurs particularly in children one to three years of age and not in adults. The most prominent symptoms are redness of hands and feet, scarlet cheek and nose, excessive sweating, coldness of the limbs, salivation, desquamating sores, itching, marked hypotonia, inability to walk, photophobia, marked sleeplessness and extreme peevishness; loss of several or all teeth in a short time. The most characteristic feature is that he is not like a child, he is sullen and resentful. The diagnosis is not difficult, if the clinical picture is rememebred. None of our two cases were however diagnosed although they gave a history of illness extending for about a year because the possibility of such a disease was not remembered.

Nothing definite is known about the aetiology of the disease. Wood and Wood consider avitaminosis as inconclusive. Because in Australia where pink disease is almost endemic, the children are generally well-nourished and do not exhibit signs of avitaminosis. Braithwaite thought light sensitivity is a factor in the production of the disease. But patients improved

when they were nursed in the open. Seasonal incidence also does not support his contention. It is often found that the children give a history of former infection either of the skin or of the upper respiratory tract. In both of our cases there was history of the skin infection. FEER thought that it might be due to a virus which has a predilection for the autonomic nervous system. No bacteriological or pathological examination is of any help. The autopsy reports of the few cases that died are so varied and contradictory that they add nothing but confusion in the search for an aetiological factor. Unfortunately investigations of our cases did not shed any new light on the aetiological factors. On the other hand certain assumptions can be made from the therapeutic results in our cases. Previous to the institution of parenteral vit. B complex and liver extract therapy, both the children had varieties of drugs for over a year. They had bismuth injections, soneryl tablets, vitamins and gentian violet applications without the slightest benefit. These two children were the most miserable creatures, when we first saw them, and got shocked at their distress. It was remarkable that after 4 or 5 injections of vit. B complex and liver extract, the mental attitude of both of them changed markedly and they could sleep and did not scream any longer. The salivation from the mouth diminished, rhagades round the mouth started healing, and they could look at the surroundings; after a month's treatment with 30 injections, they were entirely different children. It seems likely that vitamin B complex has a specific action on the course of the disease and may also have some aetiological relationship.

We also remember in this connection that these patients suffer from an attack of anorexia for several months and a condition of nutritional deficiency may supervene and therefore even if the vitamins may not have any specific action, they must be included in any therapeutic management of these cases.

From time to time special importance of vitamin B or B complex has been put forward by various authors. FORSYTH noted improvement with the oral use of 180-600 units of vitamin B_1; he also combined it with other factors of vitamin B complex. He points to the similarity of features in pellagra and pink disease and therefore considers such therapy theoretically justified. DURAND *et al* also noticed improvement with parenteral vitamin B_1 therapy. But doubt has been expressed by others, notably by BILDERBACK. In our cases we used vitamin B_6 and

vitamin B complex and there is no doubt that it helped the patients remarkably in the final recovery. Whether it helped specifically or as an adjuvant is very difficult to say, but it can be reasonably assumed that vitamins do have a greatly beneficial effect in this distressing disease.

SUMMARY

Two cases of Pink Diseases (Acrodynia) are described.

Though the disease is not very rare in other countries only six cases are reported so far from India. It is quite likely that the disease is missed and therefore the importance of correct diagnosis is stressed.

The significance of vitamin B, particularly of vitamin B complex as an aetiological factor, and also as a specific therapeutic agent is pointed out.

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Post-script.—Since writing this paper, we came across an article by ELMORE on the Role of Mercury as a probable cause of Acrodynia and its treatment with dimercaprol (Bal) and also of BIVINGS and LEWIS on the same subject. In our cases we could not get any history of mercurial therapy, neither Bal is available in this country for therapeutic trial.

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